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ABSTRACT

The expository and creaive writing of Native American high school students enrolled in a summer program at Colorado College sponsored by TRIBES (Tribal Resource Institute in Business, Engineering, and Science) is featured in this document. Part 1 presents a simulation problem in energy and resource management followed by reports submitted by 28 students in response to the assignment. The assignment provides background information on a hypothetical case: the Tiger Indian Tribe--living on a large reservation in western Colorado and facing the problem of rising energy costs and high unemployment--is considering specific proposals to build either a hydroelectric or coal-fired electric generating plant. Seven special interest groups and their biases are described: tribal business leaders, Tiger Labor Organization, Save Our Environment Coalition, Tiger Consumer Association, Tiger Farm Association, Office of Engineering Analysis, and Colorado Ute Power Company. The student reports, each prepared by four students representing a special interest group, include an analysis of the feasibility of the power plant proposals, a specific proposal consistent with the group's own interests, and the use of economic analysis to support the group's position. Part 2 consists of 16 pieces of creative writing by students--most with Indian culture themes--in the form of poetry, short stories, and essays. (JHZ)

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Part I

Tribal Resource Institute in Business, Engineering, and Science

T.R.I.B.E.S.

TRIBES ENERGY AND RESOURCE MANAGEMENT SIMULATION

The Colorado College

Summer, 1984

Project designed by

Dr. Val Veirs, Director
T.R.I.B.E.S.

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Part II

CREATIVE WRITING

Essays submitted by the T.R.I.B.E.S. students.

RC015228

directed by

Linda Hogan

U.S. DEPARTMENT OF EDUCATION
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TRIBES Energy and Resource Management Simulation

The Problem.

A large but little-known tribe, the Tigers, occupies a large reservation in western Colorado. When this reservation was granted to the Tigers in 1837, the federal government made a small error in specifying its geographical boundary. The result was that the Tigers tribe received land that was extremely rich in resources, with abundant water, farmland, wildlife, and mineral wealth.

The Tigers tribe has, for centuries, been an agricultutral tribe, and has attempted to be relatively self-sufficient. It has raised its own food, and has produced its own clothing and housing. The Tigers' principal import has been energy; electricity is purchased from the Colorado Ute Power Company, which uses coal-fired power plants. Income to pay for this power has come from exports of grain grown on the reservation, and some export of hand-crafted goods.

One concern facing the tribe is its future ability to pay for energy. The price of electricity has been rising rapidly, and food prices have been declining. It has been increasingly difficult to pay the bill to the CUPC.

Income per capita in the Tigers reservation is estimated to be about $2500, a figure which includes the value of all production on the reservation. The population of the reservation is 20,000; it has been increasing at a rate of about 3% per year. The unemployment rate is now 55%.

Energy consumption is now the equivalent of about 2600 Kilograms of coal per capita. This figure is considered relatively high, given the income level on the reservation. It does not include energy from firewood, which is widely used for supplemental heat. Firewood is, however, becoming more and more scarce.

The Tigers tribe has always prided itself on its policy of assuring free energy to all. Each member of the tribe has an automatic right to collect all the firewood he or she wants. Electricity is purchased from the CUPC collectively by the tribe; each member is free to use an unlimited amount, without charge. Electricity consumption per capita has been increasing at a rate of about 3% per year.

There are two potential energy sources on the reservation, which have not yet been tapped. One is the Gunnison River, which could be used to generate electricity. Such generation would require the installation of a dam, and the flooding of a magnificent natural resource, the Black Canyon of the Gunnison. The second potential source is a rich coal deposit which underlies a large agricultural area on the reservation. It is estimated that there are more than 50 billion kg of coal close to the surface, and thus readily available for extraction using surface mining techniques.

Given the tribe's difficulties in meeting its energy bills, there has been considerable discussion of the possibility of exploiting these energy sources commercially. One possibility is

to build a hydroelectric plant on the reservation. Another is to build a coal-fired power plant. Data concerning these two alternatives are presented below. A third possibility, suggested by the CUPC, would be to mine the coal, but sell it to the CUPC, rather than developing the tribe's own plant. After several years of debate, the tribe is about to reach a decision. There will be a meeting July 31 of the Tribal Council. The Council has committed itself to deciding whether one or more of these alternatives, or some other alternatives, should be pursued.

There are several interest groups which will be making presentations to the Council at the August 5 meeting. These include the Business Leaders group, the Tigers Labor Organization, the Save Our Environment Coalition, The Tigers Consumers Association, and the Tigers Farm Association. The tribe also has a reserach organization, the Office of Economic Analysis, which will be making a presentation. Finally, there will be a presentation by representatives of the CUPC.

The July 31 meeting will be an important one. It could result in a major change in the Tigers' future. Each interest group is planning an elaborate presentation, aimed at convincing the Council to make the "right" choice.

The Task.

You will each be assigned to a group. Each group is responsible for the preparation of a written (five pages typed, double-spaced) report to the Council. This report must include an analysis of the feasibility of the hydro and coal-fired power plant proposals, a specific proposal consistent with the group's own interests, and the use of economic analysis to support this position. In order that the Council may study these reports prior to the meeting, they must be submitted to the Council's Executive Secretary, Dr. Val Veirs, by 5:00 p.m. July 30.

The meeting of the Council will be at 1:15 p.m. July 31. Each group will be responsible for making a presentation to the Council to support its position. These presentations may be in the form of short speeches, skits, or whatever the group feels will be most effective in making its point. Each presentation must be limited to 10 minutes or less. After all presentations have been made, a spokesperson from each group may make a closing argument of no more than 5 minutes. Members of the Council may wish to ask questions of each group after its presentation.

At the time of the submission of the written reports, each group should designate one of its members to sit as a member of the Council. While the representatives of the CUPC may not, of course, vote on the Council, a representative of this group will be able to sit as an ex-officio, non-voting member of the Council. Members of the Council, once selected, are expected to disassociate themselves from the interests of their respective groups, and to make decisions in the best interests of the tribe. Members of the Council will not participate in group presentations to the Council.

When all presentations have been completed, the Council will begin secret deliberations on a policy decision. The final

decision of the Council must have the support of at least four of its six members. The Council will present its decision at a gala pizza banquet that night, to be prepared by an as yet unnamed restaurant other than SAGA. The Council will be responsible for the presentation of a brief statement explaining the factors in the decision it has reached.

In addition to the group reports and presentations, each participant will be responsible for the preparation of a five page report explaining his or her own contribution to the group's report, and the reasons this contribution did or did not affect the final choice by the Council. These papers will be due at 9:00 a.m. July 30. Each student will receive a grade for his or her paper, and will also receive a grade for his or her groups's written report and presentation to the Council. The individual paper, group written report, and group presentation will each count one-third of the total grade for the project.

The Groups.

1. Business Leaders. The tribe's Business Leaders, who run firms which produce clothing, housing, a variety of services, and hand-crafted items for export, are anxious to encourage economic growth. They see energy development as a method to lower energy costs, and thus to make Tigers exports more competitive in national and world markets. They are particularly interested in automating the production of goods now being made by hand, such as baskets and rugs. Cheap energy, they think, is the key to achieving this. While these leaders recognize that increased tribal properity is important to their own success, they are concerned that, with higher incomes, members of the tribe may begin to import more goods from other areas. Business leaders are thus anxious to make sure that there will be restrictions on imports from outside the reservation, so that any increase in tribal income is not spent on goods made elsewhere. The Business Leaders are quite interested in mining coal as a method of increasing income, given the long time period which would be required before any plant could become operational. They feel the reduction of farm land could be offset by the use of more modern agricultural techniques, which would increase yields per acre. They have been frustrated by the refusal of the tribe's farmers to adopt some of these techniques in the past.

2. Tigers Labor Organization. Most workers are in the tribe's agricultural sector, and are not members of the TLO. The TLO thinks energy development will bring new jobs--jobs which will increase TLO membership. This would give the TLO considerably more clout in tribal decisions. The TLO also anticipates that energy development--whether mining coal for the CUPC or the development of the tribe's own energy production capability, would place upward pressure on wages, making the TLO's position stronger in labor

negotiations. The TLO has consistently supported the continuation of the tribe's free energy policy, and expects any revenues from energy development to be used for the provision of social services for its members.

3. Save Our Environment Coalition. This group is horrified at the prospect of strip-mining some of the tribe's most beautiful areas, or of flooding its farmlands. It stresses the fact the Black Canyon is a magnificent, and irreplaceable, resource. It is also, they note, the habitat of the black-footed ferret, a lovable little creature which is on the endangered species list. SOEC warns of the pollution that may come with strip-mining or with burning coal. Some members of the Coalition think the continued importation of electricity allows the pollution to be generated elsewhere, where it belongs. They see no need to change present arrangements for electricity. Other members of the coalition are concerned about pollution on a wider scale, and argue the tribe should not only refuse to develop its own energy resources, but that it should cut back on its consumption of the CUPC's energy. These members of the Coalition are generally opposed to charging users of energy a price for their consumption, but support some form of rationing to limit consumption. All members of the coalition support controls on the cutting of firewood.

4. Tigers Consumers Association. The tribe's consumers have organized to protect consumers from high energy prices. This group, while it is concerned about environmental quality, is most concerned about providing cheap energy to its members. It is almost violently opposed to rationing or to charging people for their use of energy. It argues that energy development and environmental quality are not incompatible, and that ways can be found to provide cheap energy without doing excessive harm to the environment. The Association is concerned about reliance on the CUPC, on grounds the tribe has no control over the prices the company can charge.

5. Tigers Farm Association. Farmers are not enthusiastic about coal development, which would destroy a substantial area of the tribe's farmland. In general, this group favors a return to a more traditional life-style, one which stresses the wise use of the land, and that does not consume a great deal of energy. The farmers thus favor conservation. In order to make the tribe more independent of outsiders, the farmers have also backed the development of alternative energy sources, such as solar devices and wind generation of electricity. These approaches, the farmers have argued, will allow the tribe to preserve its natural resources for the future, and to live a life which respects the land, rather than exploiting it for narrow economic gain.

6. Office of Engineering Analysis. The engineers working

for this tribal office have no particular interest to seek. They want only to analyze the choices before the tribe, and to help the Council select the best course for the future. They recognize the presentations by various interest groups are likely to be slanted, and thus are anxious to give the Council accurate information. The OEA has long favored the extremely unpopular strategy of charging members of the tribe for their consumption of electricity and firewood, a policy which has led many tribe members to conclude that the A in OEA stands for something besides Analysis. Because the position of the engineers regarding energy pricing has become so unpopular, the OEA must devise a proposal which takes political, as well as economic, reality into account.

7. Colorado Ute Power Company. The Company's interests are simple. It does not want the tribe to develop its own energy supplies. It does want the tribe's coal. And it wants to keep tribal consumption of energy high. It thus endorses the tribe's free energy policy.

NOTE: Each group, in preparing its written report and presentation, should take the other groups' positions into account, presenting arguments which deal with the claims the other groups are likely to make, and pointing out how its own proposals will help other groups. While it will be useful to anticipate the arguments of other groups, the placing of moles in opposing organizations is not encouraged.

The Power Plants.

The specific proposals under consideration are to build a 120 MW hydroelectric plant, or a 120 MW coal-fired electric generating plant. It is estimated either will take ten years to build--nine years to get the necessary permits, and one year of actual construction. Both plants are expected to last 30 years, once built, and to operate at an average of 80 percent of capacity. It is anticipated that any electricity not used by the tribe could be sold to users elsewhere. The price of electricity is now 6 cents per KWh.

One relation which will be useful in your calculations is the fraction of the intial investment which must be paid back each year of the project's life in order to clear this initial outlay. This is equivalent to the fraction of the purchase price of a house which must be paid each year to pay it off by the end of the term of the mortgage loan. It is a function of the interest rate and the time period. The fraction is given by:

$$\frac{r(1+r)^n}{(1+r)^n - 1}$$

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where r is the interest rate and n is the number of years of the project's life.

A second relation you will need is the concept of present value. When costs or revenues occur in the future, and a decision must be made today, it is necessary to convert them to their present value. The present value of a future sum which will occur n years from now may be thought of as the amount which, if put in the bank today earning interest rate r, would be equal to the value of the future sum in n years. The present value of such a future sum, R, is:

$$PV = \frac{R}{(1+r)^n} .$$

The coal-fired plant. Current construction costs for coal-fired plants are about $1,000 per kW. Operating costs (not including fuel) are about 19 mills/kWh (1,000 mills = $1). Coal costs $17.50 per ton, at the mine. Its relative cost has remained roughly constant for the last 30 years. About a third of this cost is for the labor to extract it.

The hydro plant. The construction cost of the dam and generating plant is now estimated to be $127 million. Operating costs are about 8 mills/kWh.

To aid in you analysis of these alternative projects, you should append two worksheets to your group report. These should be organized as follows:

	YEAR				
ITEM	1	2	3	....	30
Output (kWhs)	-	-	-		-
Price (value)/kWh	-	-	-		-
Total revenue	-	-	-		-
Capital Cost (each year)	-	-	-		-
Operating Cost	-	-	-		-
Fuel Cost	-	-	-		-
Total Costs	-	-	-		-
Net Value	-	-	-		-
NET PRESENT VALUE	-	-	-		-

NET PRESENT VALUE OF PROFIT (LOSS) OF PROJECT:

Note that you will have to make some forecasts to work through the feasibility analysis. You should justify each of your forecasts in the report. Use supply and demand analysis to illustrate your argument. You may feel that other costs or benefits should included in the worksheet. If so, put them in, and explain your reasoning in the report. You may find it hard to estimate a number for some of these items, but you must do it in order to make comparisons with other dollar values.

In making your projections, assume no inflation. If you expect any price to rise, think of it as an increase relative to other prices. For example, the price of coal has risen since 1950, but at the same rate as other prices. If you expect this to continue, then you would report no change in the price of coal. You should use an interest rate of .05 (5%) in all your calculations.

The Presentation.

In addition to your written report, much will depend on the effectiveness of your group's presentation. You may wish to use visual materials, such as overhead transparencies or slides (if you want to use slides, they are available, but need to be arranged early--see Val). You may wish to present a skit or a musical presentation. Try to think of the type of presentation which will convey the basic point you wish to make to the Council in the most clear and direct way possible.

Sources.

Use the library--and the reference librarians, to find materials to develop your arguments. In addition, the materials listed below will be available on reserve for use in the library.

GENERAL DESCRIPTION TO THE TIGER INDIAN RESERVATION

The Tiger Indian Reservation is approximately 1000 square miles of land that is generally situated between the North Fork of the Gunnison River and the mainstem of the Gunnison River and is west of the Elk Mountains and east of the Uncompahgre River valley. Most of the reservation is on a topological feature known as Fruitland Mesa. The southern boundary is demarked by the deep canyon known as the Black Canyon of the Gunnison, where there is still evidence of seasonal prehistoric Indian settlements. Vegetation in this portion is mountain shrubs and pinon-juniper woodland. To the north, sagebrush is intermixed with agricultural land. Upper and lower cretaceous period coal strata underlie the central and north-eastern portions of the reservation. Most of the tribal members reside in the northern portions of the reservation. The principal towns are Hotchkiss and Paonia on the North Fork of the Gunnison. The small town of Crawford is in the eastern, central region of the reservation. Off the reservation, to the west, are the large communities of Montrose and Delta.

GROUPS

1. BUSINESS LEADERS:
   Hanks, Tewa, Lujan, Wallace

2. LABOR ORGANIZATION:
   Sanchez, Tenorio, White, Woodall

3. ENVIRONMENTALISTS:
   Begay, Foster, Thrower, Weil

4. CONSUMERS:
   Boyer, Giaccardo, Nabahe, Sutton

5. FARM ASSOCIATION:
   Doney, Plumage, Sandoval, Sorci

6. TRIBAL ENGINEERS:
   Lucero, Manymules, Reed, Swan

7. UTE POWER COMPANY:
   Little, Suina, Warner, Wilson

TRIBAL PROPOSAL

BY

BUSINESS LEADERS

JULY 31, 1984

GROUP MEMBERS

James Lujan

Jay Wallace

Donna Tewa

Carol Hanks (Council Member)

The first portion of this report from the Business leaders of the Tiger Tribe will breifly outline the problems facing the tribe and arguments made by some of the other groups which each have an interest in the outcome of the July 31 Tiger Tribe Council meeting. The final portion of the paper will include rebuttals to the statements made by the aforementioned groups as well a proposal consisent to the interest of tribe's business leaders. In addition, an analysis of the feasibility of the proposed hydro and coal-fired power plants will be an addendum to the report.

The Tiger Tribe has, for centuries, been an agricultural tribe, and has attempted to be relatively self-sufficient. The Tigers' principal import has been energy; electricity is purchased from the Colorado Ute Power Company, which uses coal-fire power plants. Thus far, income to pay for this power has come from exports of grain grown on the reservation, and some exports of hand-crafted goods.

One concern facing the tribe is its future ability to pay for energy. The price of electricity has been rising rapidly, and food prices has been declining. As a result, it has been increasingly difficult to pay the bill to the Colorado Ute Power Company.

Income per capita on the reservation is about two-thousand five-hundred dollars. The population of the reservation is twenty-thousand; it has been increasing at a rate of about three per-cent per year. The unemployment rate is fifty-five per-cent.

Energy consumption is equivalent to about two-thounsand

six-hundred kilograms of coal per capita, or 5.2 x 10^7 kilograms of coal collectively. The rate of electricity consumption has been similar to the population, increasing three per-cent per year; therefore, with a doubling time of twenty-three years, fourty-thousand people will be using 1.04 x 10^8 kilograms of coal.

There are two potential energy sources on the reservation which have not yet been tapped. One is the Gunnison River, which could be used to generate electricity. Such generation would require the installation of a dam, and the flooding of a magnificent natural resource, the Black Canyon of the Gunnison. The second potential source is a rich coal deposit which underlies a large agricultural area on the reservation. It is estimated that there are more than fifty-billion kilograms of coal close to the surface, and thus readily available for extraction using surface mining techniques. With the total Tiger reservation coal reserves at 5 x 10^10 kilograms and the present annual use at 5.2 x 10^7 kilograms with a growth rate of three per-cent per year, the reserve would be expected to last about fourty-years.

The six other factions which have a special interest in the final Tiger Tribe analysis are the Tigers Labor Organization, the Save Our Enviroment Coalition, the Tigers Consumers Association, the Tigers Farm Association, the Office of Engineering Analysis, and the Colorado Ute Power Company. Since most of the tribes workers are in the agricultural sector, the Tigers Labor Organization is chiefly interested in creating new jobs to expand T.L.O. memb-

ership and give them a more prominent position on tribal council. Also, the T.L.O. endorses the tribes free energy policy. The Save Our Enviroment Coalition is desperately against coal mining or flooding the Black Canyon. They also warn that the endangered black-footed ferret would be in danger of becoming extinct if its habitat was destoryed. The S.O.E.C. also warns against pollution and is for conservation of energy. The Tigers Consumers Association is violently opposed to charging people for energy and argues that energy developement and environmental quality are not incompatible. They are also concerned about the tribe's reliance on the Colorado Ute Power Company for energy. The Tiger Farm Association is opposed to coal developement, which would put their farmland in jeopardy. They have backed the developement of alternative energy sources, such as solar devices and wind generation of electricity. The Office of Engineering Analysis supports the unpopular strategy of charging members of the tribe for their consumption of electricity and firewood. They have no particular interest, they want only to analyze the choices before the tribe. The Colorado Ute Power Company does not want the tribe to develope its own energy supplies, but it does want the tribe's coal and it wants to keep tribal consumption of energy high.

As the tribe's business leaders, our goal is to motivate the tribe to become economically self-sufficient. The following proposal is our means by which to accomplish this goal. First of all, we and our backers are prepared to support the construction of a one-hundred and twenty mega-watt hydroelectric plant.

It is estimated that it will take ten years to build--nine years to get the necessary permits, and one years of actual construction. The plant is expected to last thrity years and operate at an average of eighty per-cent of capacity. In order to make the best of a potentially environmentally disastrous situation, the business leaders proposal to develope the flooded Black Canyon into Black Canyon Lake. The proposed Black Canyon Lake will be developed into a tourist spot, open for camping, fishing, sailing, scuba diving, etc. There will be a luxury hotel by the lake side complete with gift shops, sport shops, golf course, and an Indian cultural museum. The new Black Canyon Lake tourist attraction will create new jobs and bring in revenue to the tribe.

During the 10-15 years until hydroelectric plant is built and/or Black Canyon Lake is filled, carefully selected reservation lands will be strip-mined for extraction of coal to be sold to the C.U.P.C. and any other interested parties until the completion of the hydroelectric plant.

The funds to build the power plant, strip mine, construct the Black Canyon resort area, and train tribe members to strip mine coal for ten years and to maintain the power plant will be appropriated through our investments as well as those of our backers with any federal grants we can manage to pull in. In addition, a great deal of the initial funding will be taken care of by tribal bingo and a paramutual race track which will be opened on the reservation.

In order to secure the economy of the Tiger reservation,

we also propose that a limit be placed on all imports to the tribe. The tribe will continue to export all of its unique cultural goods such as rugs, blankets, baskets, moccassins and pottery; however, to make Tiger exports more competetive in the national and world markets, factories will be built to automate the production of reservation goods and by automating, we will be able to bring in more revenue at an increased rate. The funds, for construction of these factories would be supplemented by bingo and race track revenue as well as our own investments.

It can clearly be stated that we are accomplishing one of the cheif goals of the T.L.O., which is to increase T.L.O. membership by providing the tribe with their own skilled workers.

In view of the tribe's alarmingly increasing alcoholism rate, a 14% tax on alcoholic beverages will be implemented. the revenue from said tax will be used to create an A.A. program as well as job training programs, unemployment programs, and other social services.

During the period of time coal is extracted and sold to the Colorado Ute Power Company, tribe members will still not be charged for energy consumption, giving poor, unemployed persons an opportunity to get jobs and get back on their feet. By the time the hydro-plant begins operation, we will gradually phase in a service charge to each tribe member to cover power plant expenses. We business leaders feel that reliance on the C.U.P.C. is extremely unwise. By controlling our energy distribution, the C.U.P.C. is able to economically manipulate the tribe by raising prices when they see fit. The tribe must break free of this

umbellicle cord to become more self-sufficient.

It is unrealistic to expect that all of this will occur overnight. It is also an unrealistic expectation to believe that any great profit will be made in the first decade. After the resort is completed, a great deal of revenue will be coming in to pay back our investors and for us to make a profit. A portion of this revenue will be used to reclaim the strip-mined lands and funds will be appropriated to breed the black-footed ferret and relocate it to its original habitat in the Central Great Plains. During the course of strip mining operations, any farmer whose land is offset will be compensated by having modern farm equipment loaned to them to increase their yeild per acre and thereby increase their income.

The alternative energy sources which were recommended by the Tiger's Farm Association are both unreliable and costly. Solar devices, in particular, would require a vast area for any sort of power plant, and since the T.F.A. wishes to prepare their land, they would be contradicting themselves by going along with it.

As has been ,mentioned above, the immediate profit returns will not be very significant at first; however, as soon as the majority of our moneymaking projects get underway, a profitable return is expected. We are doing all of this for the good of the Tiger tribe. As one can see, we are clearly making an attempt to cut unemployment and economically stabilize the Tigers to becoming self-sufficient. All in all, the effects will be gradual but significant.

FEASIBILITY ANALYSIS OF A COAL-FIRED POWER PLANT

Revenue: YEAR =	1	2	3	4	5	6	7	8	9	10
Output(kWhs)										1.05E+09
Price(value)/kWh										$0.06
Total revenue(thousands)										$63,000
Costs:										
Capital Cost (tho)	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806
Operating Cost (tho)										$19,950
Fuel Cost (tho)										$11,485
Reclamation(tho)										
Cost of farmland(tho)	$26	$26	$26	$26	$26	$26	$26	$26	$26	$26
Loss of farmland(tho)	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5
Misc.Exp.(tho)	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Environmental Costs(tho)	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Total Costs (tho)	$10,837	$10,837	$10,837	$10,837	$10,837	$10,837	$10,837	$10,837	$10,837	$42,272

Net Value(tho)	($10,837)	($10,837)	($10,837)	($10,837)	($10,837)	($10,837)	($10,837)	($10,837)	($10,837)	$20,728
Present Value(tho)	($10,321)	($9,830)	($9,362)	($8,916)	($8,491)	($8,087)	($7,702)	($7,335)	($6,986)	$12,725
Net Present Value(tho)	($10,321)	($20,151)	($29,512)	($38,428)	($46,919)	($55,006)	($62,708)	($70,043)	($77,029)	($64,304)
Project NPV(tho)	$90,041									

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11	12	13	14	15	16	17	18	19	20	21	22	23
1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09
$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806
$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950
$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485
$554	$554	$554	$554	$554	$554	$554	$554	$554	$554	$554	$554	$554
$26	$26	$26	$26	$26	$26	$26	$26	$26	$26	$26	$26	$26
$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826
$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174
$11,795	$11,204	$10,699	$10,189	$9,704	$9,242	$8,802	$8,383	$7,983	$7,603	$7,241	$6,896	$6,568
($52,506)	($41,275)	($30,576)	($20,387)	($10,683)	($1,441)	$7,361	$15,743	$23,727	$31,330	$38,571	$45,468	$52,036

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24	25	26	27	28	29	30
1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09
$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806
$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950
$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485
$554	$554	$554	$554	$554	$554	$554
$26	$26	$26	$26	$26	$26	$26
$5	$5	$5	$5	$5	$5	$5
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826
$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174
$6,255	$5,957	$5,674	$5,404	$5,146	$4,901	$4,668
$53,291	$64,248	$69,922	$75,325	$80,472	$85,373	$90,041

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FEASIBILITY ANALYSIS OF A HYDROELECTRIC POWER PLANT

Revenue: YEAR =	1	2	3	4	5	6	7	8	9	10
Output(kWhs)										1.05E+09
Price(value)/kWh										$0.06
Total revenue(thousands)										$63,000
Costs:										
Capital Cost (tho)	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226
Operating Cost (tho)										$4,040
Loss of farmland(tho)	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Environmental Costs(tho)	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Total costs	$12,226	$12,226	$12,226	$12,226	$12,226	$12,226	$12,226	$12,226	$12,226	$16,266
Net Value(tho)	($12,226)	($12,226)	($12,226)	($12,226)	($12,226)	($12,226)	($12,226)	($12,226)	($12,226)	$46,734
Present Value(tho)	($11,644)	($11,089)	($10,561)	($10,058)	($9,579)	($9,123)	($8,689)	($8,275)	($7,881)	$28,691
Net Present Value(tho)	($11,644)	($22,733)	($33,294)	($43,353)	($52,932)	($62,055)	($70,744)	($79,019)	($86,900)	($58,210)
Project NPV(tho)	$299,339									

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11	12	13	14	15	16	17	18	19	20	21	22	23
1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09
$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226
$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266
$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734
$27,324	$26,023	$24,784	$23,604	$22,480	$21,409	$20,390	$19,419	$18,494	$17,614	$16,775	$15,976	$15,215
($30,885)	($4,862)	$19,922	$43,526	$66,006	$87,415	$107,805	$127,224	$145,718	$163,332	$180,107	$196,083	$211,298

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24	25	26	27	28	29	30
1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09
$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226
$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266
$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734
$14,491	$13,801	$13,144	$12,518	$11,922	$11,354	$10,813
$225,789	$239,589	$252,733	$265,250	$277,172	$288,526	$299,339

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Tiger Labor Organization

Submitted July 30, 1984

Fred Tenorio
Jimbo Woodall
Chris Sanchez
Charlene White

The Tiger Labor Organization believes that one of the major problems of the Tiger Tribal Council is to decide on the unemployment status of the tribe. We believe that the opening of the coal fields to the Colorado Ute Power Company for strip-mining operations is the best economically feasible energy choice for the tribe to make. This will provide the tribe with capital to pay for energy needs, but most importantly decrease the high unemployment rate of the Tiger Tribe, by providing jobs for the Tribe members.

The revenues earned from the enery development would benefit the Tiger Labor Organization to be used for the provisions of social services for our members. We feel that the Colorado Ute Power Company should hire about 85% of the Tiger Tribe members and the other 15% that is not calculated is due to the lack of untrained persons.

There are several options to the problem of energy production which could work, to some extent. Each of these has their ups and downs in respect to the reservation and environment and economy.

We believe that the hydroelectric plant option involves the flooding of a natural creation that is beautiful and irreplacable, the Black Canyon of the Gunnison. This option would be extensive electrical energy at an inexpensive role, with many problems. If you flood the canyon a natural landmark would

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be destroyed along with the possibility of destroying an endangered species, the black-footed ferret. The biggest problem of the hydroelectric power plant is that it would not help the unemployment rate of the Tiger Tribe for the hydroelectric power plant is highly automated and would only need a handful of employees to watch over its operation.

The option that fullfills the problem of the Tiger Tribe is the coal-firing generating plant. This is the best choice for it is economically unfeasible in such small applications. the construction of such a project would involve a large employment force for the Tiger Tribe. The plant is highly expensive and no profit would be earned. The plant would create a large debt, that would increase a little a time.

Another option is selling the self-mined coal on the open market. This is not a good idea, because several problems arise. Some aspects of this is the lack of trained personnel and the high cost of strip-mining. Equipment needed and the large amount of time is required before a notable profit is earned.

The option of wind-powered generators is an highly unfeasible application. This idea could be successful in an area where the wind has a continuous motion. However, there is little

wind to continuously move the windmill blades, let alone produce enough electricity to supply the tribes people of twenty thousand. This would only be a waste of time and money.

One question arises--Has anyone ever seen a field wind generator supply a whole community of at least twenty thousand in Colorado?

The option of using the reservation for tourism is out of the question. The Canyon is a natural creation but, we doubt that people would want to come to see a canyon as a major tourist attraction.

A solution to improve the methods of farming would not help the fact that the unemployment rate would remain constant, while only individual farmers would benefit from this proposal.

The solution that offers the best benefits to the people of the Tiger Tribe reservation is to lease the land to the Colorado Ute Power Company. This solution will offer increased revenue to the Tribe, and decrease the unemployment rate a major amount. The CUPC also endorses the free energy policy to the tribe. The work of strip-mining that has a reputation of destroying the land is solved. We have found in The World Book Encyclopedia Volume 4, 1980 edition, pages 580-581, the law that in 1977,

Congress passed a law requiring all U.S. electric power plants built since 1971 to reclaim the land they used for strip-mining. The first step is to level the piles of dug-up soil and rock. This area is then reseeded. The project is finally completed when the new vegetation is fully grown. By the end of the thirty years of production, the Colorado Ute Power Company will estimate about $177,420,000 in profit.

By our calculations of the data that we collected, the Tiger Labor Organization proposes that the Tiger Tribal Council lease the coal-filled lands to the Colorado Ute Power Company for the benefit of the members of the tribe and the future generations of our people.

It will take nine years to obtain the required permits and one year to complete the construction of the coal-fired power plant. The cost of construction and lease is $6,400,000 and the bank is willing to loan us $127,000,000 at 5% a year for 30 years.

After three years in operation we will have the loan payed-off and revenue will began to go towards the Tiger Labor Organization which will give us considerably more speaking power

and tribal decisions. By the increased wages of our members working for this company this will make the Tiger Labor Organization a stronger force in labor negotiations.

5

T.L.O:

Charlene White

Fred Tenorio

Jumbo Woodall

Chris Sanchez

	1	2	3	4	5	6	7	8
LOAN .05	6,350,000	6,350,000	6,350,000	6,350,000	6,350,000	6,350,000	6,350,000	6,350,000
LEASE	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
Maintenance operating cost)	0	0	0	0	0	0	0	0
Salary fuel cost)	0							
REVENUE	0							
Total Cost	6,400,000	6,400,000	6,400,000	6,400,000	6,400,000	6,400,000	6,400,000	6,400,000
Net Value	-6,400,000	-6,400,000	-6,400,000	-6,400,000	-6,400,000	-6,400,000	-6,400,000	-6,400,000
Present Value	-6,095,200	-5,804,988.7	-5,528,560.6	-5,265,295.6	-5,014,567.3	-4775778.7	-4548360.6	-4331772
Net Present Value Profit loss)	-6,095,200	-11,900,189	-17,428,750	-22694045	-27,708,613	-32,484,391	-37,032,752	-41,364,524

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9	10	11	12	13	14	15	16
6,350,000	6,350,000	6,350,000	6,350,000	6,350,000	6,350,000	6,350,000	6,350,000
50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
0		19,950,000	19,950,000	19,950,000	19,950,000	19,950,000	19,950,000
		7,000,000	7,000,000	7,000,000	7,000,000	7,000,000	7,000,000
		63,000,000	63,000,000	63,000,000	63,000,000	63,000,000	63,000,000
6,400,000	6,400,000	33,350,000	6,400,000	6,400,000	6,400,000	6,400,000	6,400,000
6,400,000	-6,400,000	29,650,000	-				
		(1-05 40")					
4,125,497.1	- 3,929,044.9	17,335,740	16,570,230	15,724,028	14,975,265	14,262,157	13,583,006
45,490,021	-49,419,066	-32,083,326	-15,573,096	150,932	15,126,197	29,388,354	42,971,361

operating cost 3 times fuel cost

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17	18	19	20	21	22	23	24	25	26
350,000	6,350,000	6,350,000	6,350,000	6,350,000	6,350,000	6,350,000	6,350,000	6,350,000	6,350,000
50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
19,950,000									
7,000,000									
3,000,000	63,000,000	63,000,000	63,000,000	63,000,000	63,000,000	63,000,000	63,000,000	63,000,000	63,000,000
6,400,000	6,400,000	6,400,000	6,400,000	6,400,000	6,400,000	6,400,000	6,400,000	6,400,000	6,400,000
2936197	12326188	11733512	11174773	10619264	10135849	9653189	9198513	8755727	8338788
5,807,558	68,227,746	79,961,258	91,136,031	101,780,000	111,910,000	121,570,000	130,760,000	139,520,000	147,850,000

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27	28	29	30	
6,350,000	6,350,000	6,350,000	6,350,000	
50,000	50,000	50,000	50,000	
63,000,000	63,000,000	63,000,000	63,000,000	
6,400,000	6,400,000	6,400,000	6,400,000	
1,941,703	7563526	7203358	48603417	
55,790,000	16,336,000	170,560,000	177,420,000	

TIGER TRIBE PROJECT

SAVE_OUR_ENVIRONMENT_COALITION

JULY 31, 1984

GROUP_MEMBERS

1. VICTORIA BEGAY
2. DARLENE FOSTER
3. MARY THROWER
4. MARY WEIL (COUNCIL MEMBER)

We, the environmentalists, strongly disagree with the idea of strip-mining the Black Canyon of the Gunnison. There are some options. Hydroelectric is a very bad idea because the flooding of the farmlands will leave the tribe with no food. A coal burning plant would be just as bad since it will cause a distruction of the land and pollution to the people and the animals.

Health plays a major role in our argument. The pollution, the air from the mining, which can cause lung cancer, and there is also the fear of mining cave-ins. If the mine is to create more jobs, what is the use of making money when you'll only use it to pay hosptal bills?

Wildlife on the reservation will become scarce if the strip-mining and coal burning occurs. With the pollution of the air, water and the land, these lovable creatures will eventually die off. There is one great fear for the endangered specie, the black-footed ferret, which has been cited in the area of the Black Canyon.

The black-footed ferret is an endangered specie which makes its home in the Black Canyon of the Gunnison. We strongly disagree with the idea of its total distruction. This creature has had to adapt to this environment because it was almost wiped out once before. When this occured, the ferret migrated from the Great Plains to where it now is. The ferret is a small animal that burrows in the earth and does no harm to people or the

environment. The main point, however, is that it is endangered. At this point, the numbers are not very high.

The strip-mining will cause great harm to the land and the animals. The topsoil which has been used for farming will be totaly ruined. Ths means, that even after the mining is completed and the resources are used up, the land will be useless. Is it really worth it? We think not. After 30 years where will we be? The land will be worthless and the people are no longer going to have jobs and they will not be able to farm the lands.

Our disagreement with the idea o building a hydroelectric plant on the reservation is based on the flooding of the tribe's farmlands. If this plant is built, then how will the people obtain their food? This tribe is a self-sufficient tribe in terms of food. Tiger tribe has always raised its own food. By the building of this plant, this agricultural tribe would have to come up with alternatives to buy their own food.

Animals live off these farmlands and they will also be wiped out. Without these animals, we are left with just a polluted area without much life. The land and animals will be harmed by the flooding just as it will be harmed by the coal burning.

There is a big concern with pollution. We feel that there will be massive amounts of pollution generated in the Black Canyon area if the coal-burning plant and the strip-mining take place. If we were to keep obtaining energy from CUPC the pollution would be generated elsewhere, which would be a benefit to us, because the animals and the people will have no health problems.

The pollution from the strip-mining and the coal burning will eventually get into the waters. The people and animals live off these waters. The plants and crops are irrigated with these waters so this polution will harm everyone and all these animals. Eventually, this may cause a great decrease in the wildlife and even the population of the Tiger Tribe.

If the mines are created, the people who work there will be exposed to the air which can cause lung cancer. There will be a great need for treatments of this disease. With the creation of the mines comes the added responsibility of finding a way to solve this major health problem.

The mines are capable of caving in. If the top soil over the mines get deteriorated or damaged to the point that it is not strong enough to hold up, the workers are victims of this problem. If the people are to be harmed, then the company will have a hard time getting people to work for them.

Our solution to this whole problem is that the tribe should not develop its own energy resource but to keep using the CUPC energy. The tribe should cut back on their consumption of the CUPC's energy by putting a limit of how much energy a household is able to use. We disagree with the idea that the people should be charged for their use of the energy. If the CUPC needs to be paid, the tribe will be able to pay it off with our plan of building a dairy product farm.

The coalition strongly feels that the cutting of the firewood needs to be slowed down. The people need to cut back on how uch firewood they use. We can solve this problem by allowing

the people only a certain amount of firewood per household.

We firmly believe that there is no real need to build a hydroelectric plant and a coal burning energy plant. The pollution is a problem that can be avoided. The problem with the unemployment rate can be solved with our idea of building of a dairy producing farm.

Instead of changing energy sources, we propose to provide a source of income which will pay for the electricity being used. We plan to compose a dairy farm. This offers an alternative to the other plans in that it will not be damaging to the land or the environment. Listed below are the positive aspects of building and maintaining a dairy farm.

1) Regular Income
2) Making of Money Immediately
3) Lowering Unemployment
4) Improving Economy
5) No Distruction of Land
6) Self-Sufficient & Self-Improving
7) No Life Span
8) Back to Nature for Tribes People
9) Increasing Land Quality(Manure)

This farm will allow the unemployment rate to be decreased and the families will be able to have a regular income. The farm will allow the income to start coming in because of the products which will be exported. This bringing in of money will help the economy also.

This farm will agree to the fact that it will not harm

the land at all. As a matter of fact, it will help the land in the idea that the farming will become better. The cow manure will serve a great fertilizer for the farmlands. This will help the tribe return to nature.

These are our points in arguing to save the land resources and the animals, especially the black-footed ferret. We feel that these points are the major arguments that will help the Tribal Council in deciding on the right choice.

YEARS THE FIRST TEN YEARS

1-10

LOAN - 6,000,000 LEASE - 80,000

TOTAL COST - 6,080,000 NET VALUE - (-)6,080,000

NET PRESENT VALUE - (-)5.7905 X 10^6

NET PRESENT VALUE OF PROFIT - (-) 5.7905 X 10^6

YEARS THE SECOND TEN YEARS

10-20

LOAN - 6,000,000 LEASE - 80,000

OPERATION - 166,445 PRECAUTION - 10,000

SALARY - 8.76 X 10^6 SCENIC -5 X 10^4

WATER P. - 1 X 10^4 ACID RAIN - 3 X 10^4

RECLAIM - 1 X 10^5 WASTE WATER - 1 X 10^5

COAL - 6.6255 X 10^6 TOTAL REVENUE - 5 X 10^7

TOTAL COSTS - 2.1932 X 10^7

NET VALUE - +2.8068 X 10^7

NET PRESENT VALUE - +1.6411 X 10^7

NET PRESENT VALUE OF PROFIT - (-)3.3169 X 10^7

YEARS THIRD TEN YEARS

20-30

LOAN - 6 X 10^6 LEASE - 8 X 10^4

OPERATION - 166,445 PRECAUTION - 1 X 10^4

SALARY - 8.76 X 10^6 SCENIC - 5 X 10^4

WATER P. - 1 X 10^4 ACID RAIN - 3 X 10^4

RECLAM. - 1 X 10^5

WATER WASTE - 1 X 10^5

COAL - 6.6225 X 10^6

TOTAL REVENUE - +5 X 10^7

TOTAL COSTS - 2.1932 X 10^9

NET VALUE - +2.8068 X 10^7

NET PRESENT VALUE -(21 YEARS) - +1.0075 X 10^6
(22 YEARS) - +9.595 X 10^5
(23 YEARS) - +9.1381 X 10^5
(24 YEARS) - +8.702 X 10^5
(25 YEARS) - +8.2886 X 10^5
(26 YEARS) - +7.8939 X 10^5
(27 YEARS) - +7.518 X 10^5
(28 YEARS) - +7.16 X 10^5
(29 YEARS) - +6.819 X 10^5
(30 YEARS) - +6.4943 X 10^5

NET PRESENT VALUE OF PROFIT -
(21 YEARS) = -6.431 X 10^6
(22 YEARS) = -5.4715 X 10^6
(23 YEARS) = -4.5577 X 10^6
(24 YEARS) = -3.6874 X 10^6
(25 YEARS) = -2.8585 X 10^6
(26 YEARS) = -2.0692 X 10^6
(27 YEARS) = -1.3174 X 10^6
(28 YEARS) = -6.0135 X 10^5
(29 YEARS) = +8.05 X 10^4
(30 YEARS) = +7.2993 X 10^5

PROFIT = $729,930.00

DAIRY_FARM

COSTS

CATTLE (400) = $400,000

MILK BARN = $100,000

THERE IS A 5% INTEREST ON A $500,000 LOAN.

1ST YR. ——— 25,000
2ND YR. ——— 20,000
3RD YR. ——— 15,000
4TH YR. ——— 10,000
5TH YR. ——— 5,000

SALARIES:

1ST YR. ----- $375,000
2ND YR. ----- "
3RD YR. ----- "
4TH YR. ----- "
5TH YR. ----- "
6TH YR. ----- "
7TH YR. ----- "
8TH YR. ----- "

MANURE:

1ST TO 8TH YEARS ------- $78,192

MILK: (4,026,000 LBS)

1ST TO 8TH YEARS ------- $452,925

TOTAL REVENUE:

$531,117.00

PROFITS

1ST YR. ---- $30,000
2ND YR. ---- 35,000
3RD YR. ---- 40,000
4TH YR. ---- 45,000
5TH YR. ---- 50,000
6TH YR. ---- 156,117
7TH YR. ----- $156,117
8TH YR. ----- 156,117

T I G E R S

C O N S U M E R S

A S S O C I A T I O N

Group Members

LANCE SUTTON
CHERYL NABAHE
WYNONA BOYER
GINA GIACARDO

TIGERS CONSUMERS ASSOCIATION ANALYSIS

We, the Tigers Consumers Association, feel that there is a great need to find an alternative way to provide energy to the Tiger Tribe without charging or rationing the amount of energy used by the tribal members.

That alternative is to build and run a hydroelectric power plant that is run by the tribe. This alternative for our own self energy is the key to self-sufficiency and self-determination for the tribe. It will help the tribe become more self-reliant and independant on ourselves and our resources. Instead of leasing away our land to other companies to take our resources for their uses, we can benefit our tribe by using them in a way to move our tribe in the steps of progress.

What we propose that the tribe do, is to build a hydroelectric power plant on the Gunnison River 100 feet east of Crystal Creek. It would not only help the tribe with the rising costs of energy from the Colorado Ute Power Company, but it would eventually help the tribe bring in an income after the plant is paid off. There are many ways in which this plant could bring in money to the tribe and also provide jobs for the tribal members that are unemployed. It would increase the tribal revenue by the recreational park by the reservior. The Tiger Tribe could establish camping areas and shops to sell their goods. The money that the Tribe makes from the recreational areas could be put into an account and kept for future business uses for the Tribe.

The way that this dam would be paid for is by the mining of coal. This coal will be mined for a period of ten years and sold to the Colorado Ute Power Company. The reason that this land would be mined for a period of ten years is because it takes approximately nine years to get the necessary permits and about a year for the actual construction. The money that is recieved from the selling of the coal would go to the construction cost of the dam. After the dam is completed, The mining would cease and the land would be reclaimed.

Reclamation of the land would be thorough . Estimated costs for reclaiming the land are presented in four catagories that represent the four phases of mined-land reclamation. They are:(1)designing, engineering, and overhead;(2)bond and permit fees;(3)backfilling and grading, and (4)revegitation.

Design, engineering and overhead costs include the developement of the reclamation plan,preparation of periodic enviromental reports, supervision of the reclamation work, engineering and surveying for enviromental protection, water quality protection and monitoring, monitoring the climate and ambient air, making archaeological,historical floral,faunal and soil surveys, and contributions to enviromental statements.

Bonding requirements have to be met in all of the western states, with exception to Arizona and Texas. The amount of the bond varies widely, and it can be cash, a savings account assignment, a purchase from a surety company, or negotiable securities. Permits or license periods vary for State to State, ranging from 1 year to 3 to 5 years. All States that required

a permit had a basic fee that ranged from $25 to $100, and many States add a per-acre fee ranging from $5 to $25.

Backfilling and grading is the most widely used type of reclamation that strip mining uses. It not only replaces the land that was removed when mining started, but it equals and is sometimes better than the land was before it was mined. It replaces the soil with new topsoil and after the land is placed uniformily on the fine-graded soil, it is ready for revegitation.

Revegitation includes all aor part of the these steps: soil preparation,seeding and planting, reseeding and replantin and irrigation. If the land that was mined is in the mountains or where a wildlife refuge is to be established, then the trees and shrubs are planted by hand. Many of the past reclaimed lands are not even noticable. These lands look they same as the surrounding area and with this, it is shown that reclamation of the land is possible and can be done in a way that the land is better than it was before.

The next alternative is wind power. This type of energy generally costs $1000 to $3000 per installed kilowatt, depending on the site. Although the cost is low,"the average speed for wind is 14 mpa annually is needed." Wind power needs the use of clear areas in very high places to continually keep the windmills running. The wind has to be blowing continually at a speed of 14 mpa to keep the windmill at an advantage. Other things that could ruin the efforts of wind power are turbulence, strong wind, thunderstorms, heavy snows, and icing. "Many of the hazards

of using the windmill cannot be avoided."

The second alternative is the solar power system which is not efficient with energy output of 150 kilowatts of power, because there has to be "250 days of full sun per year." The cost of construction is $4000 to $8000 per kilowatts which is a low cost. However, there has to be no shade from mountains or trees. There has to be "3 acres of level land" for solar radiation at that certain project site. Therefore, the use of solar power is not adaquate because the snowy weather would interupt the solar energy output.

As the Tigers Consumers Association, we feel that the best solution to the Tiger tribes energy problem, their unemployment rate, and to have the tribe become a more self-sufficient and independant tribe, is the construction of the hydroelectric power plant.

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1. Energy Planning Manual for California Indian Tribes, Mar.1983
2. A Sitting Handbook for Small Wind Energy Conversion Systems
3. Ibid.
4. Ibid.

Hydro electric

Revenue: YEAR =	1	2	3	4	5	6	7	8	9	10
Output(kWhs)										1.05E+09
Price(value)/kWh										$0.06
Total revenue(thousands)										$63,000
Costs:										
Capital Cost (tho)	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226
Operating Cost (tho)										$4,040
Loss of farmland(tho)	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Environmental Costs(tho)	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Total costs	$12,226	$12,226	$12,226	$12,226	$12,226	$12,226	$12,226	$12,226	$12,226	$16,266
Net Value(tho)	($12,226)	($12,226)	($12,226)	($12,226)	($12,226)	($12,226)	($12,226)	($12,226)	($12,226)	$46,734
Present Value(tho)	($11,644)	($11,089)	($10,561)	($10,058)	($9,579)	($9,123)	($8,689)	($8,275)	($7,881)	$28,691
Net Present Value(tho)	($11,644)	($22,733)	($33,294)	($43,353)	($52,932)	($62,055)	($70,744)	($79,019)	($86,900)	($58,210)
Project NPV(tho)	$299,339									

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11	12	13	14	15	16	17	18	19	20	21	22	23
1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09
$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226
$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040	$4,040
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266	$16,266
$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734	$46,734
$27,324	$26,023	$24,784	$23,604	$22,480	$21,409	$20,390	$19,419	$18,494	$17,614	$16,775	$15,976	$15,215
($30,885)	($4,862)	$19,922	$43,526	$66,006	$87,415	$107,805	$127,224	$145,718	$163,332	$180,107	$196,083	$211,298

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24	25	26	27	28	29	30
1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09
$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000

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Coal fire Plant

Revenue: YEAR =	1	2	3	4	5	6	7	8	9	10
Output(kWhs)										1.05E+09
Price(value)/kWh										$0.06
Total revenue(thousands)										$63,000
Costs:										
Capital Cost (tho)	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226
Operating Cost (tho)										$15,580
Fuel Cost (tho)										$7,000
Reclamation(tho)										
Cost of farmland(tho)	$26	$26	$26	$26	$26	$26	$26	$26	$26	$26
Loss of farmland(tho)	$15	$15	$15	$15	$15	$15	$15	$15	$15	$15
Misc.Exp.(tho)	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Environmental Costs(tho)	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Total Costs (tho)	$12,267	$12,267	$12,267	$12,267	$12,267	$12,267	$12,267	$12,267	$12,267	$34,817
Net Value(tho)	($12,267)	($12,267)	($12,267)	($12,267)	($12,267)	($12,267)	($12,267)	($12,267)	($12,267)	$28,183
Present Value(tho)	($11,683)	($11,127)	($10,597)	($10,092)	($9,612)	($9,154)	($8,718)	($8,303)	($7,907)	$17,302
Net Present Value(tho)	($11,683)	($22,809)	($33,406)	($43,498)	($53,110)	($62,264)	($70,981)	($79,284)	($87,192)	($69,890)
Project NPV(tho)	$141,492									

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11	12	13	14	15	16	17	18	19	20	21	22	23
1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09
$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226
$15,550	$15,550	$15,550	$15,550	$15,550	$15,550	$15,550	$15,550	$15,550	$15,550	$15,550	$15,550	$15,550
$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000
$554	$554	$554	$554	$554	$554	$554	$554	$554	$554	$554	$554	$554
$26	$26	$26	$26	$26	$26	$26	$26	$26	$26	$26	$26	$26
$15	$15	$15	$15	$15	$15	$15	$15	$15	$15	$15	$15	$15
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
$35,371	$35,371	$35,371	$35,371	$35,371	$35,371	$35,371	$35,371	$35,371	$35,371	$35,371	$35,371	$35,371
$27,629	$27,629	$27,629	$27,629	$27,629	$27,629	$27,629	$27,629	$27,629	$27,629	$27,629	$27,629	$27,629
$16,154	$15,385	$14,652	$13,955	$13,290	$12,657	$12,054	$11,480	$10,934	$10,413	$9,917	$9,445	$8,995
($53,736)	($38,351)	($23,699)	($9,744)	$3,546	$16,203	$28,258	$39,738	$50,672	$61,085	$71,002	$80,447	$89,442

24	25	26	27	28	29	30
1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09
$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
$9,226	$9,226	$9,226	$9,226	$9,226	$9,226	$9,226
$15,550	$15,550	$15,550	$15,550	$15,550	$15,550	$15,550
$7,000	$7,000	$7,000	$7,000	$7,000	$7,000	$7,000
$554	$554	$554	$554	$554	$554	$554
$26	$26	$26	$26	$26	$26	$26
$15	$15	$15	$15	$15	$15	$15
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
$35,371	$35,371	$35,371	$35,371	$35,371	$35,371	$35,371
$27,629	$27,629	$27,629	$27,629	$27,629	$27,629	$27,629
$8,567	$8,159	$7,770	$7,400	$7,048	$6,712	$6,393
$98,009	$106,168	$113,938	$121,339	$128,387	$135,099	$141,492

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The Tiger Tribe

Farmers' Association Proposal

July 30, 1984

submitted by

Viki Sorci

Jesse Plumage

John Sandoval

Carol Old Horn

Wallisa Doney

We, the Farmers are not enthusiastic about coal development, which would destroy a substantial area of the tribe's farmland. In general, our group favors to retain our traditional life-style, one which stresses the wise use of the land, and that does not consume a great deal of energy. Our association thus favors conservation. In order to make the tribe more independent of outsiders, we endorse the development of alternative energy resources, such as solar devices and wind generation of electicity. These approaches, we have agreed will allow our tribe to preserve its natural resources for the future, and to live a life which respects the land, rather than exploiting it for narrow economic gain.

Our past generations have thus far preserved our traditions which we intend to keep because we feel very strongly towards our past. Some of the traditions we hope to keep are our ceremonies, our burial grounds and our language. If any of these traditions are destrouyed or altered in any way, this would cause our traditions to become unbalanced, thus causing thim to be lost forever

Because of our deep respect for the land we can not condone the destruction that development would cause. We therefore take a conservative point of view towards any kind of detrimental development which would cause our land to be altered and scarred.

Currently, the business sector and the Ute Power Company are contemplating strip mining for coal. This would cause many implications for our future generations in terms of loss of cultural, economic and social values.

For example: The sudden impact of the strip mining industry

will cause culture shock among the tribe as a whole, but more specifically, the elders and the younger generation. Research studies found that seniors are always the victims of growth, and the younger population is greatly influenced by the new value system that is introduced along with the industry and its workers. Therefore, the younger population grows up with a different set of values from their parents,and thus, this generation is more likely to move away from the traditional culture.

We propose wind generated electricity as opposed to the strip mining since this agrees with our beliefs about conservative use of our land.

The cost of installing 180 wind generators is estimated to be appproximating $4.5 million compared to dam constuction costs exceeding $127 million. They will produce a total output of 122.2 megawatts per year. Maintenance is projected to be approximately $64,000 per year. The wind generator will cover a total of about three and a half football feilds. This type of energy conversion system could reasonably be completed in about two years and its energy output capacity would exceed the hydro-electic plant energy output by 2.2 megawatts. The hydro-electic plant would also require about ten years to construct and begin operations.

We also purpose a solar irrigation system as opposed to the hydro-electic plant.

This proposed solar irriagation system would take up a total area of 550 m^2 of collector surface. This irrigation

system cam pump 10.6 million gallons of water per day. This system is fifteen percent efficient and only requires periodic washing of collectors as far as maintenance is concurned. This system would cost only $75,000 to $100,000. To illustrate how useful this system is of 300,000 irrigations systems surveyed the operation energy costs were over $700 million per year, and most of them have the same power (50-100 HP) as the one proposed.

The irrigation project would turn useless arid land into productive farmland, thereby, increasing total yeild. This project would also provide other alternatives such as replanting seedlings to restore our wood resource.

We have proposed conservation of energy via energy rationing. We feel that people will be motivated to conserve energy if this proposal is accepted. Each family unit would receive X amount of kilowatts of energy per month. Anything in excess of this amount will be charged to the family. The amount paid will go towards the loan payment for the proposal Wind Generator and Solar Irrigation System.

Our argument against the coal company is supported by the fact that air quality standards will be exceeded within and at the boundaries of the mine, and would also cause alterations in existing topography. Mining would also cause impact on water resources, as well as increased consumptive use of water resulting in decreased water yield with increasing salinity. Soil and negative productivity would be lost due to mining-site development.

Successful revegetation in this area may be difficult due to arid climate, erosive soil, wildlife habitat, and population would be lost for the lifes of the mine.

Cultural resources will be disturbed and/or destroyed by surface mining. This would also disturb our archaeological and burial sites located in the area of and around the proposed mine site.

Coal-mining will also result in constuction of transportation arteries including railroads, heavy equipment and increasing accidents and deterioration of roads.

Farmland and grazing land would be deccreased tremendously.

Population will increase drastically while social support and resreational facilities would not keep pace with population growth.

Our argument against the hydro- electric plant is supported by the following reasons:

The plant will take ten years to build and last only thirty years. It will also flood the canyon burying our archeological sites that are located in the canyon. The cost of construction is tremendous compared to that of wind generators.

The solar Irrigation project will be self sufficient. In other words the system is not utilizing resources that are depletable. This will also result in increased farming land and therefore, resulting in increased production yield. The wind generator will cut down on importation on electricity from

outside sources.

As a reesult of careful and long deliberations, our association believes that our proposal will be most beneficial to the land and the Tiger Tribe, while utilizing alternative energy sources, conserving costs and prohibiting strip-mining.

COAL OF THE TIGER RESERVATION : A COMPREHENSIVE REPORT BY THE UTE POWER COMPANY

BOARD OF DIRECTORS

David Warner
Chairman of the Board

Loren Wilson
Vice-President

Deana Suina
Sec./Treas.

We, the Board of Directors of the Ute Power Company, have taken into consideration the energy problems now facing the population of the Tiger Tribe Reservation. We feel that we have a solution to the problem. We propose a joint venture with the Tiger Tribe. This venture would consist of the mining of the coal on the Tiger Reservation. And the eventual goal being a coal-fired power plant on the reservation.

The Tiger Tribe would recieve ten percent of the revenue on the sale of coal for the first ten years. Years 11-30 the tribe would recieve ten percent of the revenue on the sale of electricity. This all comes to a total of $100,685,710 over the 30 year period. The jobs that would be created would also be an asset to the tax base. The first ten years of operation would supply the need for 250 workers at a salary of $20,000 a year, or an extra $5,000,000 a year in the community. Once the power plant has been completed they need will arise for an additional 285 employees also at an average salary of $20,000 a year. This leads to an extra $10,595,000 in the community a year.

The coal would be furnished by the surface mining of the Tiger Reservation. Surface mining begins with the removal and storage of the topsoil from the area to be mined. The topsoil is stored inorder to be replaced after the area has been mined.

Reclamation involves seperate topsoil retention, replacement of topsoil, returning land to the original contours, and revege-

tation to natural cover. Revegetation requires 6-9 inches of water per year for 5 years, this would all be at the expense of the Ute Power Company.

To all those who believe that the Ute Power Company is going to leave these mining areas in an unmanageable state of waste. You are mistaken. We, the Ute Power Company, have composed a means to return the lands back to its natural state. What we intend to do is called backfilling, grading and revegetation.[1] It consists of the removal of the vegetative cover from the designated area to be mined. When this cover, topsoil, is removed it is stockpiled so it can be replaced once mining is completed. The topsoil is graded and uniformly returned.

Revegetation includes soil preparations, seeding, planting, and irrigation. We also will take into consideration any damage to the topsoil, therefore we are prepared for disking, gauging, harrowing, mulching, adding condioners and fertilizers to the soil.

The cost of the renewal of the land is included in the constuction costs of the proposed venture. Paid by our assets as a major conglomerate.

This is an established means to preserve the land. One of our subsidiaries, in Missouri, has used this method for the last six years. In Missouri we turned our surface mined areas into a recreation area and wildlife refuge. Giving the land back to the people and the animals. We also gave the people

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[1] COAL SURFACE MINING RECLAMATION COST IN THE WESTERN UNITED STATES Copyright 1979

much needed energy.

It is our hope that the Tiger Tribe agrees to our proposition. We feel that we will both benefit from this joint venture. We feel that we have something to offer the Tiger Tribe and that they have something to offer us, both economically and energy related. The energy crisis America is now facing needs wise people to be involved in helping the United States back on its feet. The Ute Power Company hopes to be involved in this resurgence of a new and better equiped society. It is our great hope that the people of the Tiger Tribe will join us as partners in America's future of energy independence.

LOAN OF 150 MILLION DOLLARS AT 8% FOR 30 YEARS.

COSTS					
YEAR	1	2	3	4	5
LOAN PAYMENT	$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
PAYMENT OF 10% FROM COAL SALES	$68,571	$86,571	$68,571	$68,571	$68,571
EMPLOYMENT OF 250	$5 MIL	$5 MIL	$5 MIL	$5 MIL	$5 MIL
TOTAL COSTS	$10,468,571	$10,468,571	$10,468,571	$10,468,571	$10,468,571
BENEFITS					
SALE OF COAL	$685,714	$685,714	$685,714	$685,714	$695,714
TOTAL BENIFITS	$685,714	$685.714	$685,714	$685,714	$685,714
NET VALUE	$9,782,857	$9,782,857	$9,782,857	$9,782,857	$9,782,857
PRESENT VALUE	$9,002,601	$9,002,601	$9,002,601	$9,002,601	$9,002,601
NET PRESENT VALUE	($9,002,601)	($18,005,202)	($27,007,803)	($36,010,404)	($45,013,005)

6	7	8	9	10
LOAN PAYMENTS				
$5,400,000	$5,400,000	$5,400,000	$5,400,000	$5,400,000
PAYMENT OF 10% FROM COAL SALES				
$68,571	$68,571	$68,571	$68,571	$68,571
EMPLOYMENT OF 250 WORKERS				
$5 MIL	$5 MIL	$5 MIL	$5 MIL	$5 MIL
TOTAL COSTS				
$10,468,571	$10,468,571	$10,468,571	$10,468,571	$10,468,571
SALE OF COAL				
$685,714	$685,714	$685,714	$685,714	$685,714
TOTAL BENEFITS				
$685,714	$685,714	$685,714	$685,714	$685,714
NET VALUE				
($9,782,857)	($9,782,857)	($9,782,857)	($9,782,857)	($9,782,857)
PRESENT VALUE				
($9,002,601)	($9,002,601)	($9,002,601)	($9,002,601)	($9,002,601)
NET PRESENT VALUE				
($54,,015,606)	($63,018,207)	($72,020,808)	($81,023,409)	($90,026,010)

11	12	13	14
LOAN PAYMENT			
$5,400,000	$5,400,000	$5,400,000	$5,400,000
PAYMENT OF 10% OF ENERGY SOLD			
$5,000,000	$5,000,000	$5,000,000	$5,000,000
EMPLOYMENT OF 500 WORKERS			
$10,000,000	$10,000,000	$10,000,000	$10,000,000
EMPLOYMENT OF 35 MANAGEMENT			
$595,000	$595,000	$595,000	$595,000
TOTAL COSTS			
$20,995,000	$20,995,000	$20,995,000	$20,995,000
SALE OF ENERGY			
$50,000,000	$50,000,000	$50,000,000	$50.000.000
TOTAL BENEFITS			
$50,000,000	$50,000,000	$50,000,000	$50,000,000
NET VALUE			
$24,405,000	$24,405,000	$24,405,000	$24,405,000
PRESENT VALUE			
$23,378,763	$23,405,000	$24,405,000	$24,405,000
NET PRESENT VALUE			
($66,647,247)	($43,268,484)	($19,889,721)	$3,489,042

15	16	17	18
LOAN PAYMENT			
$5,400,000	SAME	SAME	SAME
PAYMENT OF 10% OF ENERGY SOLD			
$5,000,000	SAME	SAME	SAME
EMPLOYMENT OF 500 WORKERS			
$10,000,000	SAME	SAME	SAME
EMPLOYMENT OF 35 MANAGEMENT			
$595,000	SAME	SAME	SAME
TOTAL COSTS			
$20,995,000	SAME	SAME	SAME
BENEFITS			
SALE OF ENERGY			
$50,000,000	SAME	SAME	SAME
NET VALUE			
$25,405,000	SAME	SAME	SAME
PRESENT VALUE			
$23,378,763	SAME	SAME	SAME
NET PRESENT VALUE			
$26,867,805	$50,246,568	$73,625,331	$97,004,094

Years 19 through 30 remain the same except for the NET PRESNT VALUE. It is based on the same information as the previous years. Following is the NET PRESENT VALUES of years 19 through 30.

19. $120,382,857
20. $143,761,620
21. $167,140,383
22. $190,519,146
23. $213,897,909
24. $237,276,672
25. $260,655,435
26. $284,034,198
27. $307,412,961
28. $330,791,724
29. $354,170,487
30. $377,549,250

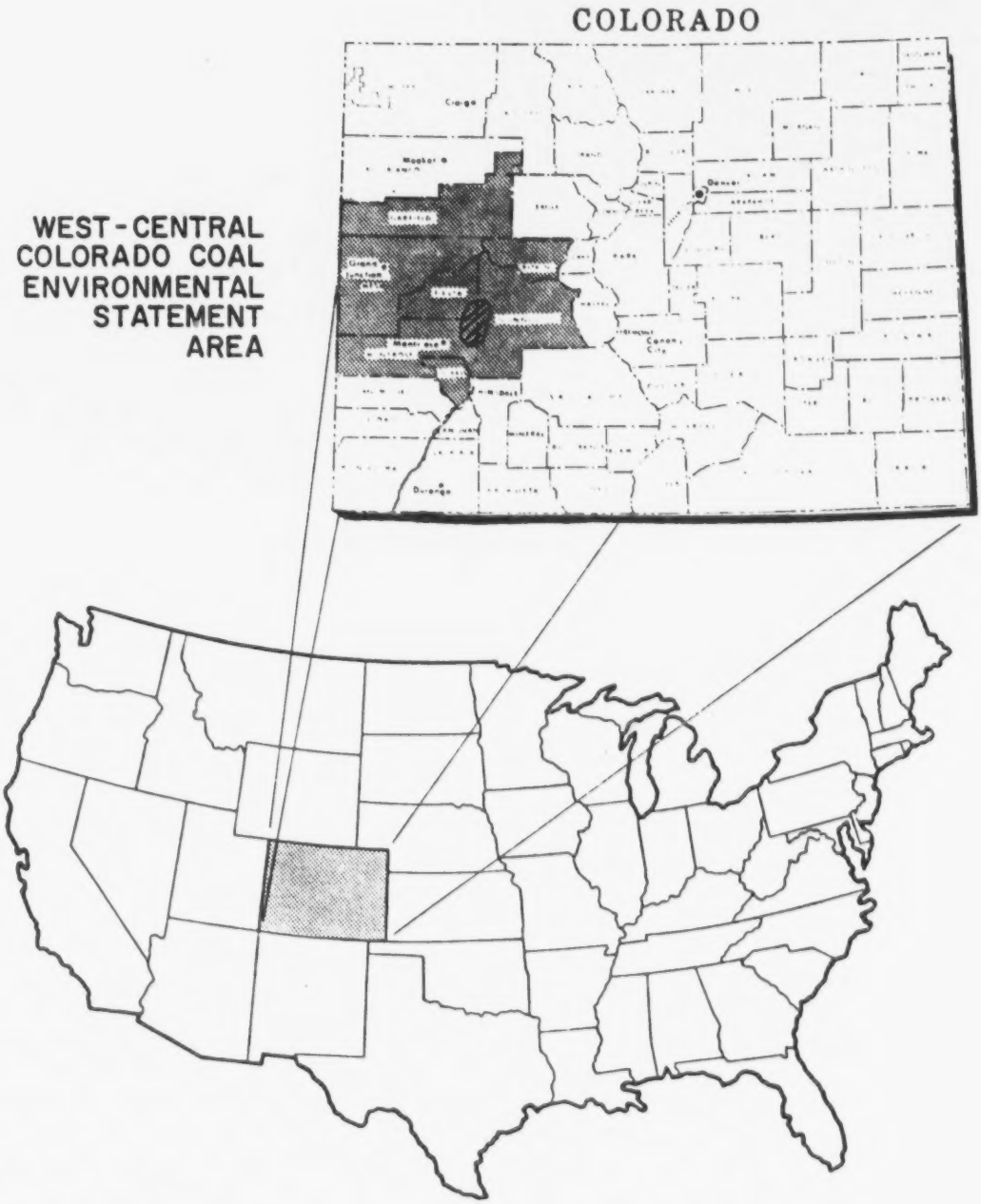

Figure R1-1. LOCATION MAP

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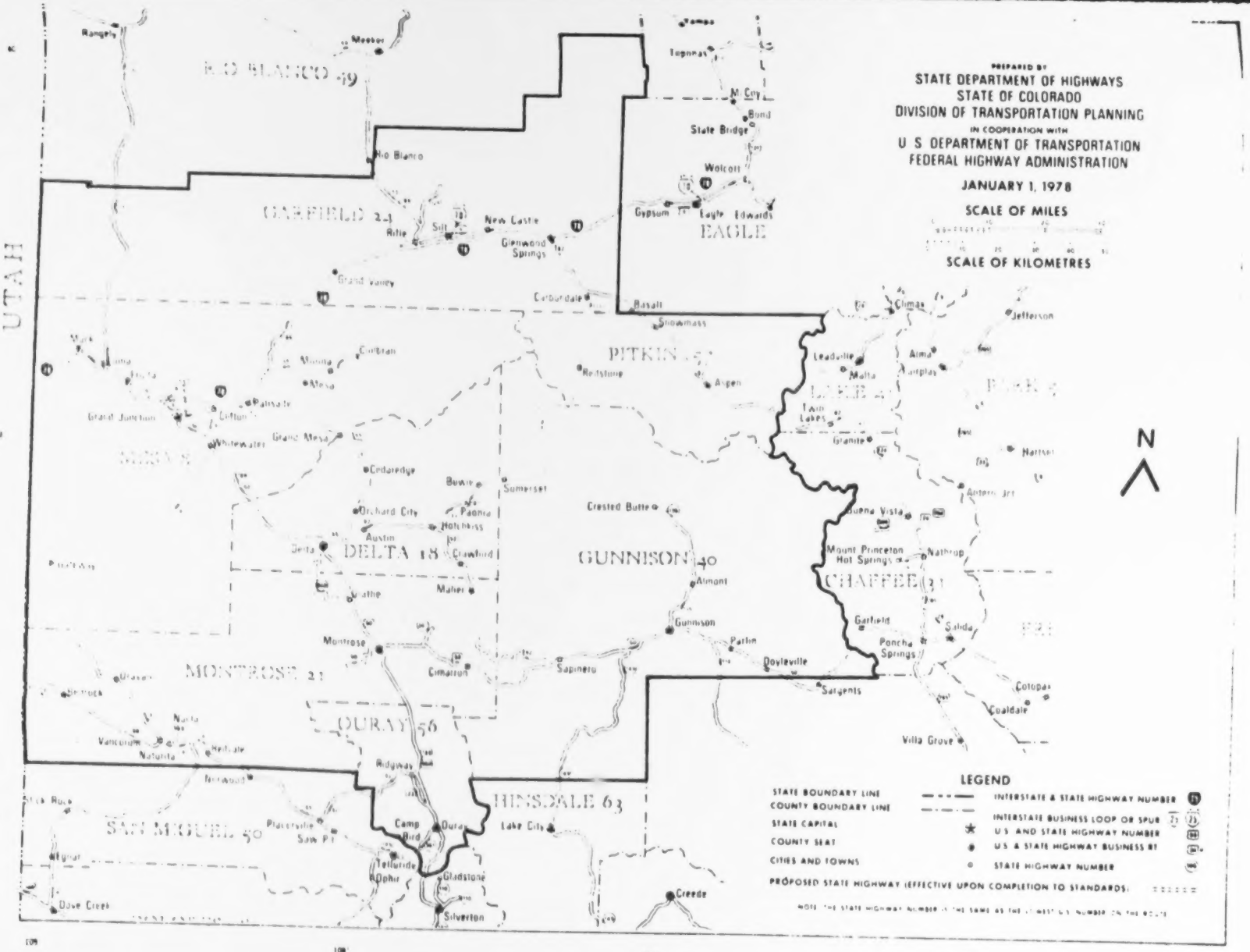

FIGURE 3. - A recreation area and a wildlife refuge in Missouri is now the use of this surface-mined land.

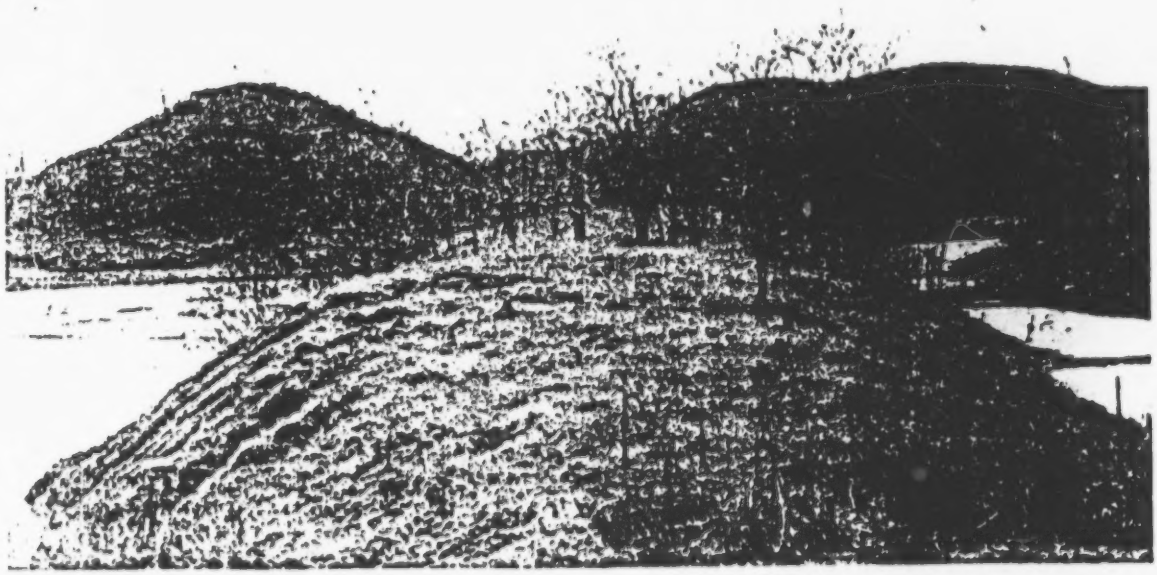

FIGURE 4. Land mined before compulsory reclamation in Missouri is used for pasture and abounds with wildlife.

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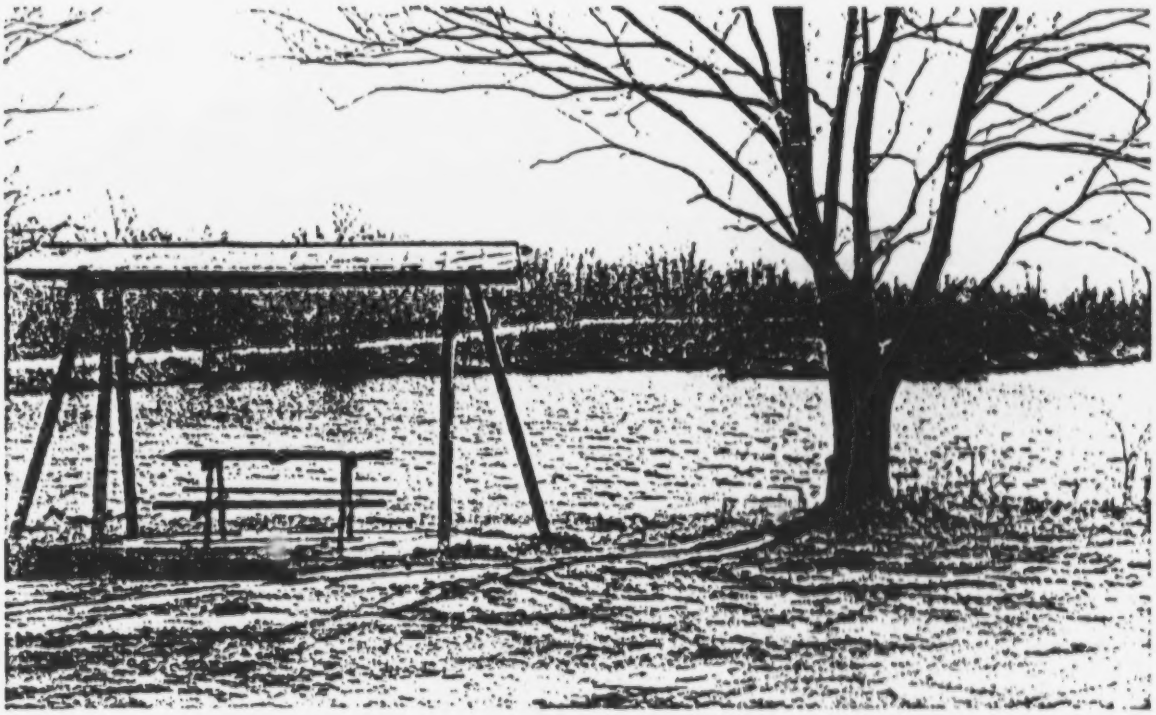

FIGURE 5. - A State recreation area on mined land in Kansas.

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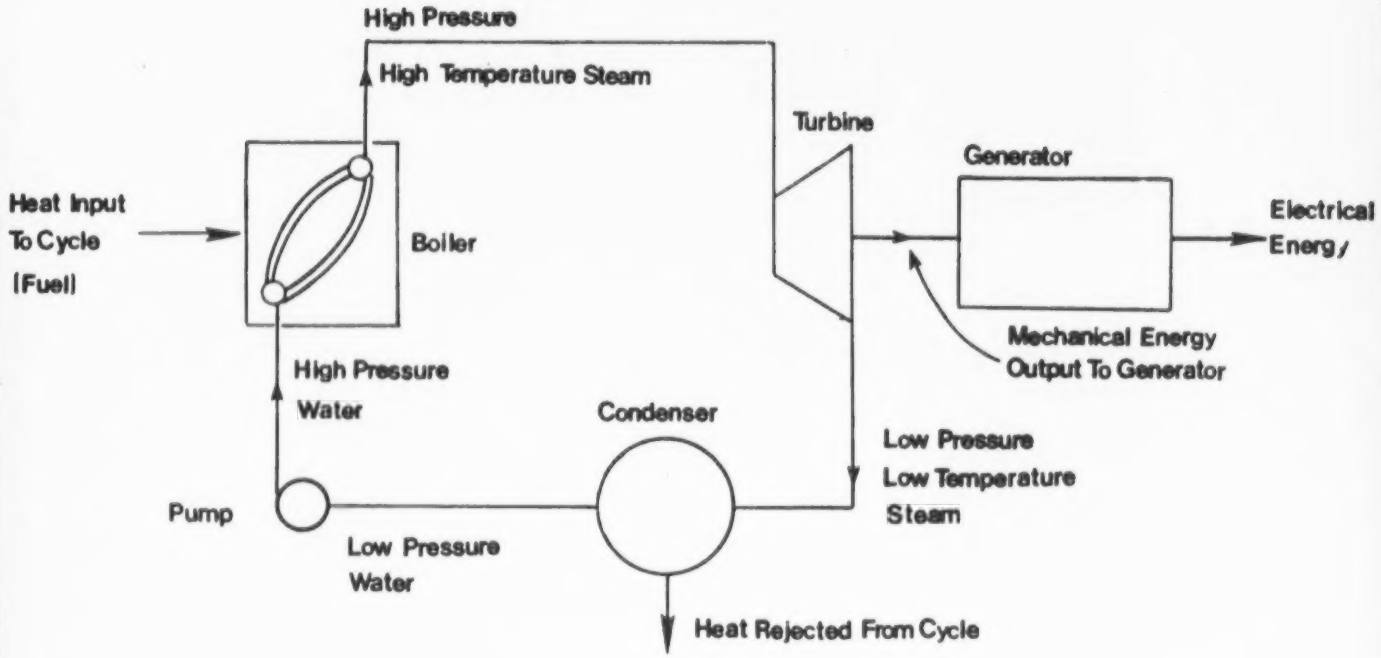
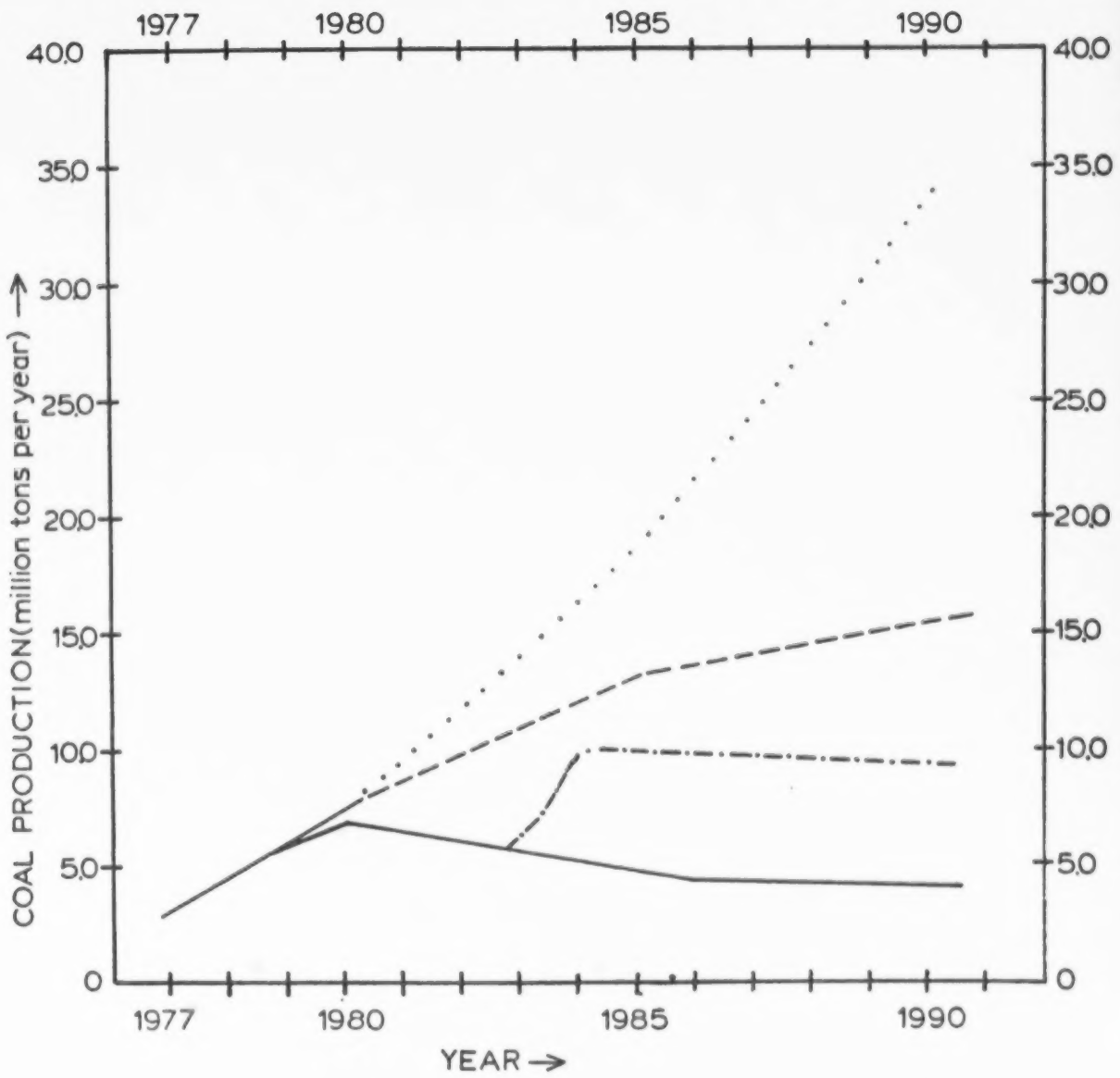


FIGURE 2-4: SIMPLIFIED SCHEMATIC OF A STEAM POWER PLANT

Source: U.S., Atomic Energy Commission. Proposed Final Environmental Statement: Liquid Metal Fast Breeder Reactor Program. Washington, D.C.: Government Printing Office, 1974, Vol. III, p. 6B.2-3.



—— Low-level production - production from private and federal reserves which reguires no federal action.

—·— Diligent development production - production from private reserves, federal leases with approved M&R plans and development of inactive leases only to meet diligent development, continuous operations requirements.

—— Mid-level production - production from both federal and private reserves which will occur with currently anticipated federal actions.

····· High-level production - production at a maximum level.

Figure R1-2. Projected west-central Colorado coal production (low-level, mid-level, high-level, diligent development)

A PROPOSAL FOR ACTION

SUBMITTED TO THE TIGER TRIBAL COUNCIL

SUBMITTED BY THE OFFICE OF ENGINEERING ANALYSIS

JULY 30, 1984

JAMES RICHARD SWAN

JOSEPH FRANK LUCERO

LAVERDA REED

VICTORIA MANYMULES

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"The tribes must learn to weigh the social and environmental costs and benefits of development. They must be able to negotiate for what they want and do not want. Most importantly, they must find ways of obtaining information and taking action before irreversible decisions are made for them." (Northeast Tribes and Communities: Energy Needs and Alternatives, Rayna Green, Terrie Ann Duda, Patricia Curlin, November 1982)

The Office of Engineering Analysis feels that the only way that the tribes can make the best decisions is to be educated. While most of the interest groups will bring im personal biases, we, as engineers, take pride in the fact that we will present the Tiger Tribal Council with simple facts. From these statistics, we will come up with a proposal that is in the best interest of the tribe. We feel that our proposal meets the needs of each of the interest groups. We will first analyze each of the present advantages and disadvantages of the possible energy sources. From this information, a proposal will be developed.

The Tiger tribe, for centuries, has followed the principles of free energy. Up till now, the tribe has been relatively self-sufficient, such as the use of wildlife as a food source. The tribe has also used wood as an energy source without restrictions. Family incomes were made from the profits of crops and

handcrafted goods. With the help of the Colorado Ute Power Company, the tribal members have also had an unlimited amount of electricity.

In contrast to the above, the energy sources will be drastical reduced due to the population growth and increase in demand. At the present rate of growth, the population will double in 23 years. At the increased consumption rate, the doubling time will be upon us in 12 years (see tables 3 and 4). Since the demand will increase, the price of energy will increase, thus leaving the tribe in financial despair.

One possible energy source available to the tribe is coal. Its benefits include an increase in tribal income. With the introduction of the coal industry, the tribe will have a base of financial income. It will provide jobs for tribal members and increased profits for businesses.

Despite the increase of monies which could circulate through the tribe, coal also has a variety of disadvantages. The coal industry will produce air and water pollution, environmental devastation and biological health hazards. The reclamation of the land after mining is not reliable. The Tiger tribe will not profit much because the maximum efficiency of the plant is 34 percent.

Another alternative for an energy source is wind power. The Tiger reservation is located in an area which has frequent winds. The facilities for wind power do not harm the surrounding environment or animal life. Since wind power is not depleting any natural resources and the air currents of the earth are

always in motion, this aspect becomes a strong advantage for wind-produced energy.

Similar to other energy resources, wind power also has its discrepancies. Facilities for wind energy have been proven to be very expensive. The wind seasons on the Tiger reservation are very short and will not produce enough energy to sustain the tribe. Even if there was enough wind, the energy efficiency is so low that it will not pay for itself, thus creating a deficit for the tribe.

The possibility of a hydroelectric dam has also been considered by the Tiger tribe. The technology for the dam is simple and relatively expensive. A hydroelectric dam is capable of producing energy at a 80 percent efficiency rate. At this rate, the tribe will receive more than enough electricity which will allow them to sell the surplus to nearby communities. This action will benefit the tribe with a profitable income.

Though the hydroelectric dam will benefit the Tiger tribe with a steady income, it will also have destructive impacts on the surrounding environment and the tribe's financial funds. The dam will cause the irreversible extinction of the river otter as well as the Peregrine falcon by flooding. The tribe's financial funds will be depleted due to large compensation payments such as water and land rights. It is also very expensive to set up facilities for the transmission of electricity if the dam site is remote and not easily accessible.

A final consideration for an energy resource is solar power. "The world largest untapped resource is one that is universal:

the Sun. The sum of its output reaching Earth - and this is only one-billionth of the total amounts to about 10 millioo times current world energy consumption. Every single square centimeter of the sun's surface gives out a constant seven kilowatt - more than double the output of the average household electric heater."1

Since solar power is unlimited and inexpensive, the tribe should reason it as a strong possibility. Quantitatively, solar power is the most abundant energy resource on the face of the earth.

"We have seen that the total solar energy reaching the earth is much greater than the energy requirements of all the world's population and that technologically it could be used to replace the energy now being supplied by fuels and electricity."2

The cost of the solar paneling and collectors is relatively inexpensive in comparison to other forms of energy. They are also most efficient in forms of electrical power. The solar facilities have no environmental effect.

"Decentralized forms of solar energy have the least environmental impact of any energy source. At the point of recovery, the rooftop there is no danger of air pollution. The point of use, also the home sight causes no effect or change in the environment."3

While all energy sources have many faults, solar energy has the least amount of discrepancies. The cost of repairing solar panels, solar cells, and other solar equipment are a minor concern. One other minute concern is the area occupied by the

solar panels. Overall, solar power is the most feasible solwtion for the Tiger tribe. Because the OEA has the Tiger tribe's best interest in mind, we support the following proposal:

OFFICE of ENGINEERING ANALYSIS

PROPOSAL

WHEREAS, the OEA has analyzed all possible energy and income sources available in the Status Quo to the Tiger Tribe.

WHEREAS, the OEA has come up with both advantages and disadvantages of each possibility.

WHEREAS, the OEA has taken the Tiger Tribe's best interests into mind.

WHEREAS, the following propasal is the most feasible solution to the Tiger's problem.

THEREFORE BE IT RESOLVED, that the following plan be put into effect.

PLANK I. MANDATES

A. Noncentralized Solar Energy will be used on the Tiger Reservation.

B. The "Free Energy" policy as it is used by the Status Quo will be abolished.

C. The Tiger's forest land will be managed and wood will be sold to consumers.

D. The Tiger Trophy Outfitters will be established and will sell permits to people interested in hunting.

E. Farming will be modernized, increasing yield per acre and increasing profits.

PLANK II. FUNDING

A. All necessary funds will be secured by investing companies and government loan.

B. Any profits made by this proposal will be directly transferred to the tribe.

PLANK III. All OEA speeches and documents will serve as legislative intent.

Table #1 Coal-Fired Power Plant Feasibility Report

Revenue: YEAR =	1	2	3	4	5	6	7	8	9	10
Output(kWhs)										1.05E+09
Price(value)/kWh										$0.06
Total revenue(thousands)										$63,000
Costs:										
Capital Cost (tho)	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806
Operating Cost (tho)										$19,950
Fuel Cost (tho)										$11,485
Reclamation(tho)										
Cost of farmland(tho)	$26	$26	$26	$26	$26	$26	$26	$26	$26	$26
Loss of farmland(tho)	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5
Misc.Exp.(tho)	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Environmental Costs(tho)	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Total Costs (tho)	$10,837	$10,837	$10,837	$10,837	$10,837	$10,837	$10,837	$10,837	$10,837	$42,272
Net Value(tho)	($10,837)	($10,837)	($10,837)	($10,837)	($10,837)	($10,837)	($10,837)	($10,837)	($10,837)	$20,728
Present Value(tho)	($10,321)	($9,830)	($9,362)	($8,916)	($8,491)	($8,087)	($7,702)	($7,335)	($6,986)	$12,725
Net Present Value(tho)	($10,321)	($20,151)	($29,512)	($38,428)	($46,919)	($55,006)	($62,708)	($70,043)	($77,029)	($64,304)
Project NPV(tho)	$90,041									

11	12	13	14	15	16	17	18	19	20	21	22	23
1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09
$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806
$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950
$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485
$554	$554	$554	$554	$554	$554	$554	$554	$554	$554	$554	$554	$554
$26	$26	$26	$26	$26	$26	$26	$26	$26	$26	$26	$26	$26
$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5	$5
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826
$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174
$11,795	$11,234	$10,699	$10,189	$9,704	$9,242	$8,802	$8,383	$7,983	$7,603	$7,241	$6,896	$6,568
($52,508)	($41,275)	($30,576)	($20,387)	($10,683)	($1,441)	$7,361	$15,743	$23,727	$31,330	$38,571	$45,468	$52,036

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24	25	26	27	28	29	30
1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09
$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
$7,806	$7,806	$7,806	$7,806	$7,806	$7,806	$7,806
$19,950	$19,950	$19,950	$19,950	$19,950	$19,950	$19,950
$11,485	$11,485	$11,485	$11,485	$11,485	$11,485	$11,485
$554	$554	$554	$554	$554	$554	$554
$26	$26	$26	$26	$26	$26	$26
$5	$5	$5	$5	$5	$5	$5
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
$42,826	$42,826	$42,826	$42,826	$42,826	$42,826	$42,826
$20,174	$20,174	$20,174	$20,174	$20,174	$20,174	$20,174
$6,255	$5,957	$5,674	$5,404	$5,146	$4,901	$4,668
$58,291	$64,248	$69,922	$75,325	$80,472	$85,373	$90,041

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Table #2 Hydro Electric Plant Feasibility Report

Revenue: YEAR =	1	2	3	4	5	6	7	8	9	10
Output(kWhs)										1.05E+09
Price(value)/kWh										$0.06
Total revenue(thousands)										$63,000
Costs:										
Capital Cost (tho)	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262
Operating Cost (tho)										$8,400
Loss of farmland(tho)	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Misc.Exp.(tho)	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
Environmental Costs(tho)	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
Total Costs (tho)	$12,262	$12,262	$12,262	$12,262	$12,262	$12,262	$12,262	$12,262	$12,262	$20,662
Net Value(tho)	($12,262)	($12,262)	($12,262)	($12,262)	($12,262)	($12,262)	($12,262)	($12,262)	($12,262)	$42,338
Present Value(tho)	($11,678)	($11,122)	($10,592)	($10,088)	($9,607)	($9,150)	($8,714)	($8,299)	($7,904)	$25,992
Net Present Value(tho)	($11,678)	($22,799)	($33,391)	($43,479)	($53,086)	($62,236)	($70,950)	($79,249)	($87,153)	($61,161)
Project NPV(tho)	$262,759									

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11	12	13	14	15	16	17	18	19	20	21	22	23
1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09
$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
$8,262	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262
$8,400	$8,400	$8,400	$8,400	$8,400	$8,400	$8,400	$8,400	$8,400	$8,400	$8,400	$8,400	$8,400
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
$20,662	$20,662	$20,662	$20,662	$20,662	$20,662	$20,662	$20,662	$20,662	$20,662	$20,662	$20,662	$20,662
$42,338	$42,338	$42,338	$42,338	$42,338	$42,338	$42,338	$42,338	$42,338	$42,338	$42,338	$42,338	$42,338
$24,754	$23,576	$22,453	$21,384	$20,366	$19,396	$18,472	$17,593	$16,755	$15,957	$15,197	$14,473	$13,784
($36,406)	($12,831)	$9,622	$31,006	$51,372	$70,767	$89,240	$106,832	$123,587	$139,544	$154,741	$169,214	$182,998

BEST COPY AVAILABLE

24	25	26	27	28	29	30
1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09	1.05E+09
$0.06	$0.06	$0.06	$0.06	$0.06	$0.06	$0.06
$63,000	$63,000	$63,000	$63,000	$63,000	$63,000	$63,000
$8,262	$8,262	$8,262	$8,262	$8,262	$8,262	$8,262
$8,400	$8,400	$8,400	$8,400	$8,400	$8,400	$8,400
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$1,000	$1,000	$1,000	$1,000	$1,000	$1,000	$1,000
$2,000	$2,000	$2,000	$2,000	$2,000	$2,000	$2,000
$20,662	$20,662	$20,662	$20,662	$20,662	$20,662	$20,662
$42,338	$42,338	$42,338	$42,338	$42,338	$42,338	$42,338
$13,128	$12,503	$11,907	$11,340	$10,800	$10,286	$9,796
$196,126	$208,629	$220,536	$231,877	$242,677	$252,963	$262,759

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Table #3 Coal Consumption under Free Energy Policy

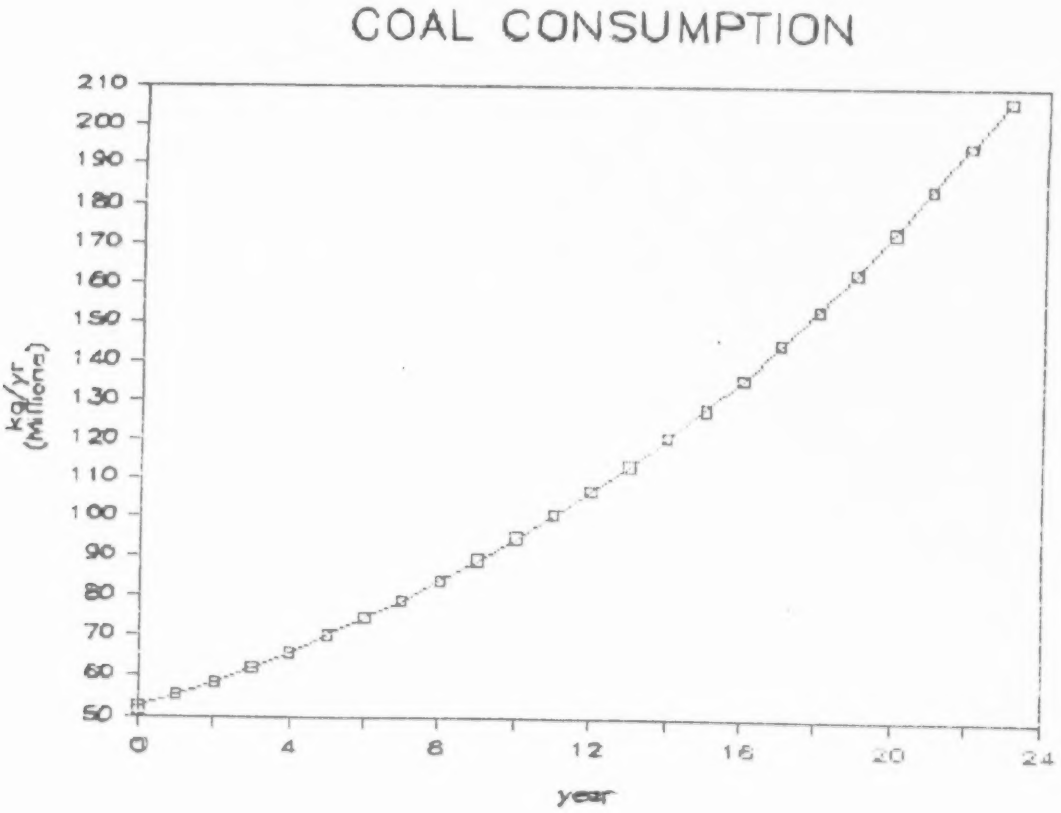

Table #4 Population Growth Curve

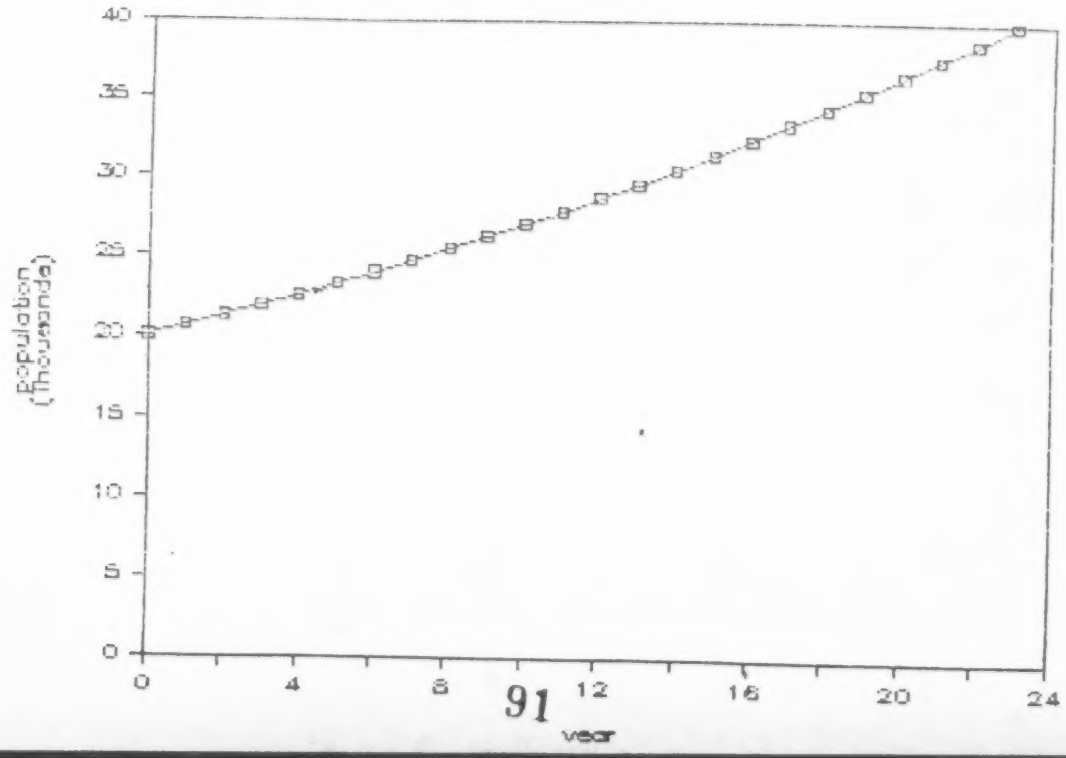

TABLE # 5 EFFECTS OF COAL-FIRED POWER PLANTS

Environmental Impact Studies of the Navajo and Kaiparowits Power Plants (Final Report 1 June 1975 - 31 May 1976) / W.S. Gaud, Et. Al. Northern Arizona University, Flagstaff. Environmental Impact Studies 1979.

Site Preparation and Construction
Coal Exploration
Coal Mining
Lime Rock
Fuel Transportation:
  Construction and Operation of railroad, conveyers
  Trucks
  Transportation fuel
Changes among the local Indian Tribes:
  Sociological
  Cultural-Political
  Economic
Cooling Water-Increasing salinity of soils and waterways
Salt drift from cooling towers
Sludge disposal
Ash disposal
Evaporation ponds
Gaseous effluent(Acid gases, particularly SO_2, NO_2, NO_2)
Particulate effluent(Trace element accumulation)
Erosion from road construction and use-revegetation of disturbed sites
Increased human use of wildlife areas
Transmission lines
Visual aesthetics-Air Quality
Further growth in urban centers

Table # 6 Expected income of Tiger Trophy Outfitters

Species	# of Permits	Cost	Total Cost
Bull Elk	15	$3500	$52,500
Cow Elk	30	$200	$6,000
Bighorn Sheep	6	$5000	$30,000
Mule Deer	25	$1200	$30,000
Antelope	15	$1500	$22,500
Total			$141,000

The populations of the above animals are rapidly increasing. these animals, with the sole exception of the Bighorn Sheep, are turning to the Tiger farmlands as sources of food. We have established that the best way to provide relief for both problems is to open the hunting season to outsiders. All monies earned from this venture will directly benefit the tribe.

NOTE: All prices mentioned above are based on the prices charged by the Kootenai Tribe.

Endnotes

1. Our Magnificent Earth, A Rand McNally Atlas of Earth Resources, Rand McNally & Company, New York, Chicago, San Francisco, 1979, p. 84.

2. Daniels, Farrington, Direct Use of the Sun's Energy, Yale University Press, 1964, p. 351.

3. Whitaker, Carol DeBerniere, An analysis of Solar Energy as an Alternative Energy Source, Colorado College, Colorado Springs, Spring, 1975, p. 47.

TIGER TRIBE COUNCIL

FINAL DECISIONS

COUNCIL MEMBERS

Chris Sanchez
Wallisa Doney
Carol Hanks
Mary Weil
Carol Old Horn
Laverda Reed
Gina Giaccardo

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TIGER TRIBE COUNCIL FINAL DECISIONS

On hearing the issues presented by various groups involved with the Tiger Tribe, each with specific concerns important to their cause, the Council of the Tiger Tribe has deliberated to reach an economic solution. This solution, which pertains mainly to the supply of energy to the Tiger Tribe, was considered by the Council to be in the best interests of the Tribe as a whole. From the decision, it can be concluded that the Council's principle intentions concern providing the Tribe with energy at a minimum cost, preserving the environment of the reservation, and retaining the traditions of the Tribe. The proposals derived from the presentations of the special interest groups which meet up to these intentions are the construction of a dairy farm, the sale of public hunting permits, the purchase of modern agricultural equipment, and the construction of solar irrigation systems and non-centralized solar devices for home use.

The dairy farm, endorsed predominantly by the Save Our Environment Coalition, cannot be viewed as a major source of income for the Tiger Tribe. However, the construction and operation of one on the Tiger reservation could possibly have a greater number of positive aspects as compared to the construction, operation, and maintenance of alternative income sources. Contributions which would be practicable with the construction of a dairy farm include a source of income for the tribe, jobs for a number of unemployed tribe members, an indefinite life

span, and fertilizer for the Tribe's farmlands. A dairy farm would not contribute to air pollution in any way, nor would one destroy any amount of land during its operation. These two points correlate to the Council's intention to preserve the environment of the Tiger Tribe reservation.

Though not directly tied in with Council intentions, the sale of public permits for hunting in bounded areas is a useful proposal for two reasons. According to the Office of Engineering Analysis, game animals such as elk and deer are greatly increasing in number. With their growth in population, the amount of food consumed by the animals increases. Thus, the animals are looking for supplemental sources of food, such as the Tiger Tribe's farmlands. With a public hunting season in effect, the game animal population would be controlled, and less crops would be lost to them. Another factor is that, through the sale of hunting permits, the Tribe would gain a profit. Though not a considerably large sum, it would nevertheless be instrumental to the needs of the Tribe.

The Council understands the wish of the Farmers' Association to remain with the traditions of the Tigers. However, it is important that the FA accept the significance of a certain degree of change to accommodate to the changes occurring outside the reservation. To oblige these changes, the Council proposes the purchase of modern agricultural equipment to aid the Tiger Tribe farmers in increasing their farms' produce. With the increase in produce such as grain, the Tribe would be capable of exportation on a larger scale. This, in turn, would increase

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incoming profits to the Tiger Tribe.

Another proposal by the Council which would assist farmers in producing a larger amount of crops is the construction of a solar irrigation system. This type of irrigation system, originally proposed by the FA, operates at no cost, and is as efficient as an electrically run system.

The final proposal involves the construction of non-centralized solar power units, to fulfill the Council's intention of providing the Tiger Tribe with energy at a minimum cost. These units, which will be built onto the individual homes of the Tribe members, will serve as a substitution for electrical power obtained from the Colorado Ute Power Company.

While solar power systems provide energy at no cost during operation, the construction of such systems does come with expenses, as does the construction of a dairy farm or the purchase of farm equipment. These expenditures will be financed by a federal loan obtained by the Tiger Tribe, until the profits earned by the proposed projects are substantial enough to compensate for the federal loan.

Indian students play political roles in study of issues

By Stephanie Hill
GT Staff Writer

The problem: The Tiger Indian tribe, which supposedly lives on a large reservation in western Colorado, faces the dilemma of rising energy costs, while its income from grain grown on the reservation is dropping.

What to do?

That was the hypothetical question that 28 American Indian high school students from around the country grappled with Tuesday afternoon as part of an eight-week institute being held at Colorado College.

The problem was further complicated by special interest groups, all of which claimed to have the ideal solution to the tribe's problem.

For example, the tribal business leaders suggested putting a hydroelectric dam on the reservation's large river, constructing a lake and resort area and paying for the whole thing with a race track, bingo games and a 14 percent tax on alcohol.

"How do you like our plan? Can you say, 'Superfantastic?' " asked James Lujan, a student from Albuquerque, N.M., as he chomped on a cigar.

Student Fred Tenorio, wearing a hard hat and playing the part of a labor leader, said the tribe should build its own coal-fired power plant and take advantage of the reservation's extensive coal deposits by strip-mining.

"With 55 percent unemployment, the tribe is in need of jobs," said Tenorio, who is from Taos, N.M. "We'll probably have to be wearing gas masks, but that's the price of technology."

However, the evironmentalists decried both the coal and hydroelectric solutions, citing the pollution and flooding of farmlands that would result.

Strip-mining or construction of a dam also could hurt the habitat of the already endangered black-footed ferret.

"His environment will be wiped out," said Mary Thrower, of Bartlesville, Okla., who suggested a dairy farm be built to raise money so the tribe could continue to buy electric power produced elsewhere.

Among the other special interest groups which voiced their concerns were the tribal farmers, a tribal consumer group, the local utility company and tribal engineers.

JOYCE MARSHALL/Gazette Telegraph

Coronado High School student Mary Well listens to the discussion at the CC session.

The tribal council, a group of seven students who listened to the various arguments, rejected strip mining and dam-building in favor of building a dairy farm, said Mary Well, a senior at Coronado High School.

Miss Well is the only student from Colorado attending the seminar. Most of the other students are from high schools on or near a reservation.

The program, now in its third year, is sponsored by the Council of Energy Resource Tribes, a consortium of nearly 40 tribes in the West.

The purpose of the program is to encourage American Indian students to pursue careers in science, engineering and business, said program director Val Veirs, an associate professor of physics at the college.

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JOYCE MARSHALL/Gazette Telegraph

Fred Tenorio, portraying a labor leader, wields an unlit cigar.

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1984 TRIBES Students

Last Name	First	Tribe	ST
Begay	Victoria	Navajo	AZ
Boyer	Wynona	Shoshone-Bannock	ID
Doney	Wallisa	Little Shell	MT
Foster	Darlene	Cherokee	OK
Giaccardo	Gina	San Felipe Pueblo	NM
Hanks	Carol	Mescalero Apache	NM
Lucero	Joseph	Isleta Pueblo	NM
Lujan	James	Taos Pueblo	NM
Manymules	Victoria	Navajo	AZ
Nabahe	Cheryl	Lone Pine	CA
Old Horn	Carol	Crow	MT
Plumage	Jesse	Assiniboine	MT
Reed	Laverda	Navajo	AZ
Sanchez	Christine	Navajo	NM
Sandavol	John	San Juan Pueblo	OR
Sorci	Vivian	Navajo	AZ
Suina	Judith	Cochiti Pueblo	NM
Sutton	Lance	Cherokee	OK
Swann	James	Chippewa-Cree	MT
Tenorio	Frederick	Taos Pueblo	NM
Tewa	Donna	Hopi	AZ
Thrower	Mary	Creek	OK
Wallace	Bradley	Cherokee	OK
Warner	David	Creek	OK
Weil	Mary	Navajo	CO
White	Charlene	Standing Rock Sioux	SD
Wilson	Loren	Narragansett	RI
Woodall	Charles	Cherokee	OK

Part II

CIRCLE OF CREATION

The circle is a way of life for the Toucan people who live in the Far East. The circle is a representation of their religious structure, which is divided into four classes. The people and the objects on the outside of the circle are representative of the earth. The people of the earth are praying to the prophets on the edge of the square. They bring the messages from the gods that are closer to the center of the circle. The "clan-fathers" surrounding the center circle are the gods who translate the commandments from the four "clan-gods". The clan-gods are the only ones who can understand the center of creation directly.

The meaning of the circle is to show us that the Toucan people are pantheistic. They believe in many gods in order to recieve the meaning of their beliefs. If any level in this structure was taken away or lost their religion would literally crumble down to nothing.

Joseph Lucero

THE RUNNING WARRIOR

As sunlight sprinkled through the trees of the forest, a young runner ran fleetingly and silently. His face wore a mask of determination and fatigue. He did not notice the passing scenery as he ran on. His thoughts were preoccupied with victory and his determination to continue running. Around his neck hung the victory whistle. He had to blow the whistle once he got to his village. The people must know the result of the battle.

The steady pumping of his arms propelled him towards his people and family. His long dark hair clung to his back and scalp. Beads of sweat trickled down the side of his face. His lean and powerful muscles glistened with perspiration from his ordeal. His sure-feet swiftly and gracefully sidestepped any obstruction in his path. He ran on.

As he neared the village, his feet became lighter and his spirit soared higher. He picked up his pace to a near sprint and raced to the hill above the village. He yearned to scream a victorious war cry but held back. Swiftly, he removed the whistle from his neck and raised it to his lips. With a smile of victory and relief, he blew.

With a proud look, he glanced down to the village below, but with a cry of shock and disbelief, he saw a massacred village with bodies scattered about the ruins. In his determination, the young warrior had not noticed the smouldering wisps of smoke

rising above the valley. Quickly, he ran down to the burnt ruins of the village.

As he approached the devastation, he cringed at the sight of the bodies of his friends and family. Desperately, he searched through the remains of the village for his woman.

With a cry of grief and recognition, he gently touched a woman who lay near the smouldering remains of their lodge. He slowly and carefully picked up the lifeless body and held her tightly to his own.

The tears slowly slipped down the side of his face as grief began to fill his heart. His lean body shook with the uncontrollable sobs of deep sorrow. His heart did not want to believe that the beautiful and fragile body in his arms was now empty of life. She had been so free of spirit and full of laughter that he could not imagine her present state. Hesitantly and gently, he laid her down upon the cold earth.

He knew the warriors of the war party would arrive soon and they would take care of the dead and their belongings. With a fierce spirit of revenge and rage, he ran blindly from the memories of sorrow. Each stride was strong and powerful as evidence of his feelings. As he ran to the crest of a hill, he glanced back to the end of his dreams, his life and love. He raised his arms to the sky and released a furious war cry.

The sky was of a deep blue color that day, mysterious, cold and foreboding. A hawk circled in the air as it prepared for a kill. Its keen eyes observed for a chance to kill its

prey. Swiftly and accurately, the hawk swooped in for a deadly strike. Its sharp talons stretched forward to imbed themselves in the soft flesh. Its war cry echoed throughout the forest. Suddenly another cry rang through the air, the hawk, startled but not frightened, glanced quickly and searchingly through the forest. In that cry, the grief, rage, and revenge were distinct as the cry blended in with the sounds of the forest.

Laverda Reed

Creative Writing

Fred Tenorio

CREATIVE WRITING ASSIGNMENT

WHAT I HOLD IN MY HAND IS AN INSTRUMENT OF DEATH. I RUN HOLDING IT IN MY HAND AND REALIZE THE POWER THAT I POSSESS. DEATH IS WHY I RUN AND MY DAYS RUN SHORT FOR ANSWERS. ONLY ONE DAY AND I SHALL REACH MY DESTINATION.

THE PEOPLE HAVE BEEN SLAVES TOO LONG. I HAVE TO RELAY THE MESSAGE OF REBELLION AND DEATH.

AS I RUN, THE SWINGING STICK REMINDS ME OF MY DUTY. THE STICK WAS MADE TO TELL OF THE COMING REBELLION. THE CIRCLE STANDS FOR THE EARTH, ITS ROUNDNESS AND THE SQUARE TELLS OF NON-CONFORMITY TO THE OPPRESSORS WHO COME TO DISBAND OUR PEOPLE AND KILL OUR RELIGION.

WE HAVE OUR OWN BLOOD FEUDS BUT NOW WE MUST UNITE AND KILL THEM. I AM ONLY THEIR MESSENGER, THE MESSENGER OF UNITY AND REBELLION.

I HAVE STOPPED. A PUEBLO I SEE IN THE DISTANCE AND ITS RADIANCE SENDS CHILLS UP MY SPINE.

AN ELDERLY MAN COMES RIDING TOWARDS ME. HE DISMOUNTS AND MOTIONS ME FORWARD. I GO AND WE DO THE ANCIENT RITUALS IN SILENCE. IT IS ALL IN SILENCE. THE MEETING AND THE WORDS. HE LIGHTS THE PIPE AND I MOTION TO THE FOUR CORNERS THAT IT IS GOOD TO GIVE THANKS TO THE WORLD. WE EACH SMOKE. NOW IT IS TIME TO TALK.

" OLD MAN. I HAVE A MESSAGE " I SAY. HE REPLIES " I KNOW YOUR MESSAGE. HOW MANY DAYS, MY SON? " TWO

I LEAVE AS HE RIDES SLOWLY BACK TO THE PUEBLO TO TELL THE NEWS.

MY BODY STREAKS FORWARD. FOREVER IT SEEMS, UNTIL I SEE THE RADIANCE AGAIN. A MAJESTIC PUEBLO STANDS MULTI-STRUCTURED WITH MANY HORSES AND MEN IN BUCKSKIN. THE KNIVES, ARROWS AND IN HAND.

I AM HANDED A WEAPON AND SOME ARROWS. A HORSE IS ALSO GIVEN TO ME. NOW I RIDE OFF TO WAR HAVING DELIVERED MY MESSAGE OF THE COMING DAY, ITS DEATH AND DESTRUCTION.

Out of the woods, he came with light steps,
so as not to disturb the plants,
the rocks, and the deer.
He gazed upon this rich land and his house,
sitting in a clearing, appeared bathed in
gold sunlight, filtering through the trees.
The day promised rain,...he was at peace
with the land and creatures around him.
Oh this beautiful land.

THE RING

Those skilled careful finger that gently worked and shaped this ring. This ring represents a part of the artist himself.

With his wife gone to the hospital, he set about his work. This morning he will make a ring to keep his mind busy, and is fingers occupied.

As he fashioned the ring with a turquoise and two coral stones, he began to shape his hopes. As a silversmith, he molded his feelings into jewelry. If he was sad, his designs were solemn. If he was happy, his designs were colorful and flowing. If he was uncertain, his designs were also uncertain.

He took from the environment the beauty which he admired and cast them into silver and intricate, colorful designs to later adorn the hands and wrists of those who shared his admiration for beauty.

But this ring he would keep.

Although he was anxious about the arrival of good news, he continued to work patiently and the ring began to take shape.

The ring suddenly took on a brilliance he had never seen before. He knew this ring symbolized beauty, creation and continuity in its unbroken pattern. It celebrated the birth of new life.

BIRDS

THE BIRDS ARE EVERYWHERE. THEY SIT IN TREES AND SHOW OFF THEIR PRETTY COLORED FEATHERS. THERE ARE BIG BIRDS AND LITTLE BIRDS. ALL OF THEM ARE VERY BEAUTIFUL. ALL OF THEM ARE VERY VAIN.

THE PARAKEET ASKED THE WIDE- EYED MONKEY TO BE A JUDGE, AND DETERMINE WHO WAS THE FAIREST OF ALL. THE BIRDS PARADED AROUND. ALL OF THEM WERE VERY COCKY WITH PRIDE. AT THE END OF THE DAY THE BIRDS ASKED THE MONKEY WHO HAD WON. THE MONKEY REPLIED, "YOU ARE ALL WINNERS!"

TOUCAN WAS VERY UPSET WITH THE WIDE-EYED MONKEY. HE KNEW IN HIS HEART THAT HE WAS THE BEST. TOUCAN WAS NOT THE ONLY ONE WHO FELT THIS WAY. ALL THE BIRDS GOT TOGETHER AND DECIDED THE MONKEY HAD MADE A MOCKERY OF THEIR CONTEST. AFTER KILLING THE MONKEY THE PARAKEET ASKED, "WHO NOW SHALL WE DISPLAY OUR BEAUTY TO?"

DARLENE FOSTER

Jimbo Woodall

I am a magical frog that has been turned into a ring. I have had many owners in my lifetime. The turquoise in my back is the power that I possess for good luck to whoever wears me. The power was put in me a very long time ago by an old Indian medicine man. He put the power in me to give to his wife so that no harm would ever come to her. I protected her until she became very old and was and was about to die, when she handed it down to her daughter and so on and so on. The owner of me now could very well be a descendant of the medicine man made me in the beginning and who the power in me to give the owner a good luck curse untill the next owner of the magical frog.

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Real Love

Darlin' I know
I'm just another head on your pillow
If only just tonight girl
Let me hear you lie just a little
And tell me I'm the only man
That you ever really loved
Take me back deep in my memory
To a time when it was very nice
So very nice

Here darlin' stands another bandit wanting you
In and out of your life they come and they go
Your days and nights turn like a wheel
Grinding down a secret part of you
Deep in your heart
That no one knows

When you say comfort me
To anyone who approaches
Your chalking up the hurt
We live and we learn
And we've both lived long enough to know
That we'd trade it all right now
For just one minute of Real Love

Jay Wallace

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VICTORIA BEGAY

COMPARISON OF CEREMONIES

The Pueblo ceremony performed by the medicine man, Betonie, in "Ceremony" by Leslie Marmon Silko, has many similarities to those performed by Navajo medicine men. The differences of both ceremonies mainly deal with length and prayer. The main similarity is that basically the origin of both religions come from Spider Woman.

Similarities between the two ceremonies are many. The idea of the origin of the religions of both tribes come from the creation of Spider Woman. Just as Betonie told Tayo about Spider Woman and her dealings with the Pueblo Tribe religion, the Navajo Indians have stories telling of how the religion and the land came to be.

Navajo history says that Spider Woman created the earth and she also created the ceremonies. The story says that she killed a bear and as she cut pieces of the animal and tossed the pieces in four directions, the four sacred mountains came to be. From these four mountains came the Navajo religion.

Ceremonies were created based on the plants and animals that grew on each mountain. The people gathered plants for medicine and the animals were a symbol of brotherhood among all living things. Nowadays, the Navajo medicine men go to these mountains to gather plants and herbs for their ceremonies. For example, the medicine man mixes these herbs and plants and he gives it to his patient as the patient is sitting on the sandpainting.

Sandpaintings are very common to the Navajo people as they are to the Pueblos. Depending on the type of ceremony that is being performed, the medicine man draws animals and "Yeh-Bi-Cheys" on the sand. The animals represent the Navajos belief that animals belong to the earth and that they should be respected. This respect is said to help a person remain healthy.

The Yeh-Bi-Chey is a god that protects the Navajo people. These gods perform in some ceremonies to heal the sick person and because of their importance in the Navajo tradition they are very highly respected.

In ceremonies which use sandpaintings, the patient sits in the center of it just as Tayo did when Betonie did the ceremony. After the patient sits, the medicine man gives them medicine to drink.

The major difference in both religions is that when the Navajos end a prayer they repeat a certain verse. Betonie's ceremony ends differently because he doesn't say a prayer after each section of the ceremony. The verse repeated by the Navajo People just asks God to bless the people with total happiness. "Sunrise would not be considered a repeated verse because it is only used at the beginning and at the end of the ceremony. It is a symbol of the beginning, which is the start of Tayo's recovery, and the end, which is when Tayo goes back to the traditional ways.

Let there be beauty behind me,
Let there be beauty before me,
Let there be beauty below me,
Let there be beauty above me,
Let there be beauty all around me.

There will be beauty all around us if we can create that balance between our religion and our materialistic life. Although there are differences, all ceremonies are created to accomplish one thing, that is to help the people to lead normal, healthy, and happy lives. Silko's book shows that this is possible as Tayo regains his health and as he returns to the traditional ways of his cultures.

Creative Writing

No longer lost in the trees I see the stars in the sky. They shine like jewelry. I walk gazing slowly up into the darkness.

Slowly the sun peaks through the dense treefilled forest.

I hear a faint tap tap tap in the distance, I tip toe closer to the noise.

As I get closer I find the noise to be coming from an old log house.

Outside I see an old man hammering a sign outside his door. On the sign it says, "I am a geologist."

The geologist looks up from under his widebrimmed strawhat and says, "Do you know how important it is to know the geology of the land?" I looked back with a dazed expression on my face and say, "no." While contemplating my response he weeds his plants with a short red garden hoe. After wiping the sweat off his brow he leans over and wispers, "Neither do I."

Loren Wilson

THE ANTLER

Many years ago, a baby deer was born. As he grew older he always wondered through the forest. He was always by himself never mingled with the other deer.

One day he met a buck. As he was walking by he frightened the buck. The buck got angry. They started to fight. The buck charged into the deer and knocked him down. The deer got back up and charge into the buck. They collided head on. At that time the deer's horn fell off. The deer got knocked out and the buck was dazed for a couple of minutes then took off running through the forest.

About five years later, there was a little boy walking in the mountains. As he was walking he found the horn. He looked at the horn for a long time and decided to take it home with him. When he got home he showed it to his father. The father told him to save it. The little boy put the horn in his room with his other collections. To this day the little boy still has the horn.

Somewhere in the mountains there is a deer running around with only one antler.

Deana Suina

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English

August 6,1984
Wallisa Doney

Long, long ago when the whiteman didn't exist, when the tribes of many Indians wandered the plains, mountains and coastal areas, there lived a bueatiful girl who wore her long black hair in two braids in the back, with clothes of the finest animal skins. Now this young girl was the daughter of a Great Chief of the Shell Tribe, which was the strongest tribe of all the tribes.

This tribe was named after their sacred charm, which of course was a Shell. Now this tribe kept a sacred Shell that kept evil away and brought them good luck all the time, as the Elders would say.

The daughter of the Great Chief had a special request upon her. As she grew up she was taught to play a flute. When she reached seventeen , she would have to play the flute for the sacred shell. The daughter of the Great Chief was just about the age where it was time to play the flute for the sacred shell. So she went to the woods to find a good Cedder tree for the wood to make a flute just for this occasion. The daughter of the Great Chief knew that it would take many days to find the right wood so she went into the woods with a couple baskets of fruit and the shell. She took the shell along with her to help her find the right wood.

The Shell tribe waited for weeks and weeks for the return of the girl and the shell, but she never returned so the Great Chief sent a searching party out to find the girl. The party searched for months ans never found the girl, but they found a little doll with two braids, a miniture white shell and the starting of a wooden flute.

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THE SHELL

For many years I've drifted
in the restless sea,
tossed to and fro by the endless tides
then laid to rest
in the glistening sand.
Days turned to years
of happiness and sadness,
years which have "etched" wrinkles into me.
They are wrinkles from
worries of destruction of my existence,
worries of destruction which eventually turned to hate,
hate which overtook my power of reasoning.
Hate which broke through
now protrudes from me like horns.
This destruction of my
inner and outer self was caused by those
who care nothing of my existence.
A loner of the vast sea,
I am only a seashell.

Donna Tewa

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"My Son"

In the glittering moon
of the tenth month,
a son was born to Ba'yes'him.

He was like the golden horizon
sweet,
innocent,
intensifying.
His eyes of a mountain lion
penetrating,
sly,
curious.
His mouth like the sacred mountain
harsh,
and boldly defined.
Skillful hands,
a gift from the "mother" spider.

He was born to run
with the swift elk.
He was born to be
strong and powerful
like the mighty bear.
He was born to be wise
like the night owl.
He was born to soar
among the clouds
like the beautiful eagle.

"...For he is my son. The savior of the
'peaceful ones'",
whispers Ba'yes'nim.

As he lifts
his son
to the
pure moon.

Donna Tewa

This is a pig. I do not know too much about pigs because I was never raised around pigs. My grandfather always had pigs but my mother told me to stay away from the sows because they might run over me and my brother.

I do know that my father once told me that pigs are the cleanest animals and that they only wallow in the mud to stay cool. Pigs are also very smart. They are said to be smarter than dogs. It's just that few people want a pig to live with them in their house.

I had an old piggy bank given to me by my great-grandmother and it was pink and blue. That pig had a big cork nose you could pull out to get your money out with. It was the only pig I really cared about.

I now have given that little pig to my little brother. I hope he enjoys it as much as I did, because there is a great sentimental value for me just giving that pig to my little brother.

LANCE SUTTON

JAMES
LUJAN

DOG OF WAR

Edward Hill was a 27 year-old Native American draftee who was fighting the war for his contry in Vietnam. He had been fighting and killing in the jungles for two months, but he wasn't tired or unhappy, he just didn't care. He didn't care about whether he lived or died or if he went back home or not. The war had turned him into a fighting machine whose only existence was to use his M-16 to kill. Because of this, he was known as the best soldier in his unit. He would always volunteer for dangerous recon missions and would frequently lead the men as well as the commanders into battle. He had no recollection of his past nor of his wife or his two young daughters.

It was a Sunday morning when Hill led two of his men to exterminate a small Northern Vietnamese village. The three men ran into the village and opened fire on everyone and everything in sight. Hill ran into a small hut to make sure that anyone hiding inside would be killed. Inside was a very old man sitting on top of a cushion made of grass. He had a pot of boiling liquid beside him. The old man reflexively flinched in terror as Hill rose the machine gun for the kill. The old man spoke in Vietnamese and begged Hill to spare his life. He told Hill that the pot beside him contained a liquid that could unlock the secrets of life. He invited Hill to sit and drink with him. Almost mechanically and without feeling, Hill emptied

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and spattering the hut with his blood.

"Come on, Hill, let's go," came the voice of one of his comrades. Hill turned and walked out of the hut and walked toward the two other soldiers who were waiting for him. Suddenly machine gun fire exploded from the jungle surrounding the village, cutting Hill's two colleagues in half. Hill immediately threw himself to the ground and opened fire in the direction of the oncoming machine gun blasts.

Hill waited for a few tense moments for any returning fire. When all appeared to be safe, he got up off the ground walked in the direction of the bushes where he had fired. He saw a machine gun covered with blood which was clear of the vegetation. He walked behind the bushes and saw the body of a young girl, who could not have been more than 10 years old, covered in blood.

Almost instantly, memories of his two daughters flooded his head for the first time in over a month. He quickly turned away from the massacred little girl and violently vomited on the adjacent shrubbery. Memories of his wife and home entered his mind. He dropped to his knees and began to sob, uncontrollably.

After he had purged his system of all his tears, he turned to the hut of the old man, remembering what he had said about the liquid which contained the secret of life. He walked inside the hut and looked at the pot of boiling liquid. He poured some of the liquid into a cup and began to drink. He drank deeply and finished the entire cup. He waited for a few minutes to wait for the effects. He assumed that the substance in the

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or maybe even a hallucinogen such as LSD. He was a very confused man and he speculated that he could be brought in closer touch with himself if he drank whatever was in the pot.

After eight minutes, he finally became satisfied that he was not going to experience any effects, so he stood up to leave. Instantaneously, he experienced a massive head rush which caused him to collapse to his knees. The room seemed to whirl around him and his heart started palpitating. He struggled to his feet and began staggering around the small hut, searching for a way out. He looked out the small entrance way, and, to his horror, saw a hideously ugly-looking dog creature which was surrounded by flames. The creature beckoned him to step forward. Unable to resist, Hill walked out the door.

Hill stepped outside the hut and found himself falling in a dark void. As he fell, weird images began to pass by him. He saw his wife, Lorranine, making love to a twelve-eyed horse. He also saw his two children being brutally beaten by an image of Christ. He screamed out to his wife and children, but no came from his mouth. He looked above him and saw the dog-like creature laughing and holding out his fiery hand, as if trying to get Hill to join him. Hill looked away from the creature and saw another image of his wife, making love to the image of Christ. He also saw his children being beaten by the old man who he had just killed. The creature continued to beckon him.

Hill desperately tried to concentrate and think of his wife and children and how much he missed and loved them. As he continued

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to fall, he saw the image of his wife making love to the old man and he saw his children being savagely beaten by the image of himself. As he desperately struggled to concentrate on his love for his wife and kids, he felt the creature beckoning him. He looked below and saw another image approaching him. The image was of him making love to his wife and of his children happily playing.

Suddenly, the creature from above tossed him a machine gun. When he caught it, he somehow felt automatically compelled to kill his family. Struggling to resist the urge, he turned the gun upward and fired upon the dog-creature. There was an explosion of fire.

Hill mmediately came to his senses and found himself in a hospital bed. Another hallucination? His body ached too much for it to be a hallucination. Nevertheless, he felt better about himself. He felt as if he had won a battle that he had been trying to win for a long time. He now knew who he was, he knew that he did not want to kill anymore, and he knew he wanted to go home to see his family.

A doctor walked over to his bed and looked at his chart. "You're a very lucky young man to have survived the bombing of the village you were in. I've got some good news for you, you're going home." Hill felt the tears roll down his cheeks.

Jim Swan

Summer 1984

Ode_to_the_Sea

I awoke early one morning from a nightmare. I dreamt that I had been drafted and I was too far from Canada to escape. I was detained at the border, booked, and incarcerated. I went to trial and as the jury began deliberating, I was saved by my alarm clock. Someone had set it for 4:00 as a joke but it saved me a possible heart attack.

I was so upset that I left my California condominium to take a long walk on a short beach. I knew that this would be a bad day when I stubbed my toe on a conch shell. I picked it up instinctively and put it to my ear. The seemingly defective shell had amessage for me. The voice sounded like Ronald Reagan's. He said," Join the Navy."

I yelled into the shell," @*&70)($! You must be on the wrong line and stop messing with my mind."

He apologetically said,"My senses aren't as good as they used to be." He then hung up.

After contemplating this for 5 minutes, I heard another voice. The voice, which belonged to Ray Parker, Jr., asked, " Who you gonna call?"

I answered with,"RONBUSTERS!!!"

He said,"That's just what I wanted to hear." He then got off the line.

I pondered the situation for 5 more minutes and then pu the shell up to my ear again. I was relieved to hear the sea.

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I then herad another voice. From all of the movies I had seen, I figured that it was Poseidon's. He asked,"Do you want to escape from it all?"

After my traumatic morning, I had no choice but to emphatically scream,"YES!!"

He said,"You don't have to yell. I may be centuries old but I am not deaf." He then gave me an offer I couldn't refuse. He told me that he would give me a ship and my own private island with no strings attached. I asked him when I could leave. The ship, complete with a full crew, appeared. Not thinking about any of my possessions, I leapt aboard. All I had time for was to look at the beauty of the sea. I thanked Poseidon for the great opportunity he gave me without even bothering to ask why.

I landed on my island. It was complete with a mansion, servant's quarters, and a beautiful lagoon. The island's atmosphere was so relaxing that I had no worries. I knew it couldn't last and it didn't.

One day natives attacked and before I knew it, most of my staff was dead. Again, I thought this was the worst day of my life and again, it turned out to be just the opposite. I was against fighting and had no military prowess, so I ran as fast as I could. I fell into a pit and thought I was dead. However, I found a stick. It looked like an ordinary stick, with one important exception. It had many carvings on it. I then thought it to be of some religious significance to the natives. I decided to wait for the natives to arrive and bargain for my life.

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As it turned out, the stick belonged to the first generation of their band. They gladly spared me my life, swore peace with me, compensated me for the destruction, and paid me a healthy sum of money. I knew that I would forever live in happiness.

That experience also taught me two very important lessons. I realized that diplomacy is always better than any militaristic aggression and you can't judge a day only by the way it starts off. These principles paid me more than any of my materialistic gains ever could.